

Certificate of Achievement

TRAINING CERTIFICATE

This is to certify that **SAPTARSHI PAUL** student of Electrical Engineering 4th Year 7th semester of Heritage Institute of Technology has successfully completed his 8 Weeks Training program during the period September 2021 - November 2021.

He has undergone his Training on PHP & MySQL. All the criteria needed for completion of the Training were successfully fulfilled by him.

I do hereby certify his work to be appropriate and to the best of my knowledge.



Date: 14th, January 2022 Place: Salt Lake City









Certificate of Training

SUMAN SAURABH

from Heritage Institute of Technology has successfully completed a 4-week online training on **Internet of Things**. The training consisted of Building an IoT Monitoring System, Controlling Devices Over the Internet, Cloud, APIs and Alerts, Machine Learning with IoT, and The Final Project modules.

In the final assessment, SUMAN scored 69% marks.

We wish SUMAN all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-10-06 Certificate no.: 1B3E67B4-360D-F175-BD25-D7C6B807FAB8

For certificate authentication, please visit https://trainings.internshala.com/verify_certificate



JHARKHAND URJA SANCHARAN NIGAM LIMITED

(CIN: U40108JH2013SGC001704)

TRANSMISSION DIVISION, KUSAI COLONY, DORANDA, RANCHI - 834002

Email id:- eeetdr@gmail.com

Letter No .: - . 14.27./

Dated:-.08.1.0.2021...

To whom it may concern

This is to certify that Rahul Raj, B. Tech (Electrical Engineering) Roll/Registration No. 12618016033, Heritage Institute of Technology, Kolkata has been successfully completed Internship on dated 13.09.2021 to 27.09.2021 at 132/33 KV Grid Sub-Station, Namkum. He has good moral character during the above mentioned period.

Senior Manager Transmission Division, Ranchi Jharkhand Urja Sancharan Nigam Limited





Certificate of Completion

11/06/2021 to 26/08/2021

This certificate is hereby awarded to



SOURAY MONDAL

HERITAGE INSTITUTE OF TECHNOLOGY, KOLKATA

who has successfully completed the **SKILL DEVELOPMENT TRAINING** on the subject

CAMPUS RECRUITMENT TRAINING

by following all the necessary criteria of the Company.

Certificate ID: ARDENT/2021/AD10822

Date of Issue: 26/08/2021

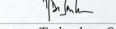


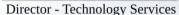




CERTIFIED ASSOCIATE









Director - HR

ARDENT COMPUTECH PVT. LTD.

www.ardentcollaborations.com

Module - 132, Ground Floor, SDF Building, Salt Lake, Sector V, Block GP, Kolkata - 700091



EASTERN RAILWAY

Office of the Sr.Divisional Electrical Engineer (Traction Distribution) Eastern Railway, Sealdah Kolkata-700 014

CERTIFICATE

This is to certify that Souradeeep Halder B.Tech. Electrical Engineering student of Heritage Institute of Technology, 994 Madurdaha, Chowbaga Road, Anandapur, P.O. East Kolkata Township, Kolkata – 700 107 has successfully completed Vocational Training under Electrical (Traction Distribution) Branch of Sealdah Division, Eastern Railway from 08.09.2021 to 22.09.2021.

The performance of Avirup Kar during the training period was quite full satisfactory.

I wish him every success in his life.

Sr.Divisional Electrical Engineer (Traction Distribution) Eastern Railway, Sealdah

(N.S.Aich)



EASTERN RAILWAY

Office of the Sr.Divisional Electrical Engineer (Traction Distribution) Eastern Railway, Sealdah Kolkata-700 014

CERTIFICATE

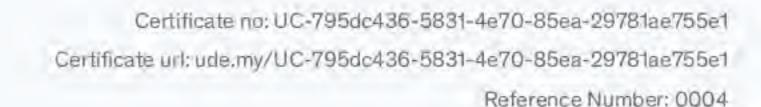
This is to certify that Souradeeep Halder B.Tech. Electrical Engineering student of Heritage Institute of Technology, 994 Madurdaha, Chowbaga Road, Anandapur, P.O. East Kolkata Township, Kolkata – 700 107 has successfully completed Vocational Training under Electrical (Traction Distribution) Branch of Sealdah Division, Eastern Railway from 08.09.2021 to 22.09.2021.

The performance of Avirup Kar during the training period was quite full satisfactory.

I wish him every success in his life.

Sr.Divisional Electrical Engineer (Traction Distribution) Eastern Railway, Sealdah

(N.S.Aich)





CERTIFICATE OF COMPLETION

Learn Python Programming Masterclass

Instructors Tim Buchalka, Jean-Paul Roberts, Tim Buchalka's Learn Programming Academy

Bhavesh Gandhi

Date Sept. 29, 2021 Length 67 total hours



Certificate of Training

Utpal Mahato

from HERITAGE INSTITUTE OF TECHNOLOGY has successfully completed a 4-week online training on **Internet** of Things. The training consisted of Building an IoT Monitoring System, Controlling Devices Over the Internet, Cloud, APIs and Alerts, Machine Learning with IoT, and The Final Project modules.

In the final assessment, Utpal scored 80% marks.

We wish Utpal all the best for future endeavours.

Jarvet

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-10-08 Certificate no.: B0F4FF8D-29AC-7364-FBE6-5C941BCADD14

For certificate authentication, please visit https://trainings.internshala.com/verify_certificate

THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED

(A Government of West Bengal Enterprise)



BIDYUT UNNAYAN BHABAN CORP. OFFICE, KOLKATA

Certificate of Training

a student of Herritage. In 8th tute of technology, Kolkata of Blechilas. This is to certify That Mr./Ms. Sohaw Jama

Engineering/ Diploma Engineering has attended and completed the Vocational Traning Programme in our Organisation from 16/04/2021 to 30/04/2021 at

BTPS / KTPS / BKTPS / SGTPP / STPS satisfactorily.

Date : 30.04.2021

(BISWAPRIYA GUHA)
General Manager (HR&A)

Corporate WBPDCL



West Bengal State Electricity Distribution Company Limited

(A Government of West Bengal Enterprise)

HUMAN RESOURCE DEVELOPMENT DEPARTMENT

OFFICE OF THE GENERAL MANAGER (HRD&TRG)

vocational Training Certificate

1.	Name of the Trainee	: SOURAV MISHRA
2.	Name of the Institute	: Heritage Institute of Tehnology, Kolkata
3.	Stream	: EE E&IE ME Civil CSE
4.	Period of Training	IT
5.	Training under Control of	: Divisional Manager, Tamluk Division, WBSEDCL
6.	Nature of Training	: Operation & Maintenance activities of Line & Sub Station upto 33 KV of WBSEDCL
REM	MARKS	
a)	Conduct : Excelle	nt Very Good Good Satisfactory
b)	Work : Excelle	nt Very Good Good Satisfactory
c)	Progress of : Excelle Training	nt Very Good Good Satisfactory
		Adak
Plac	ce : Kolkata	Authorised Signatory [With seal]
Date	e : 14.12.2021	

WBSFDEL





Certificate of Completion

11/06/2021 to 26/08/2021

This certificate is hereby awarded to

SATADIP LAHA

of

HERITAGE INSTITUTE OF TECHNOLOGY, KOLKATA

who has successfully completed the **SKILL DEVELOPMENT TRAINING** on the subject

CAMPUS RECRUITMENT TRAINING

by following all the necessary criteria of the Company.

Certificate ID: ARDENT/2021/AD10728

Date of Issue: 26/08/2021

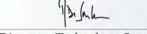


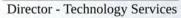




CERTIFIED ASSOCIATE









Director - HR

ARDENT COMPUTECH PVT. LTD.

www.ardentcollaborations.com

Module - 132, Ground Floor, SDF Building, Salt Lake, Sector V, Block GP, Kolkata - 700091



Certificate of Training

Sachin PAL

from HERITAGE INSTITUTE OF TECHNOLOGY KOLKATA has successfully completed a 6-week online training on **Programming with Python**. The training consisted of Introduction to Python, Using Variables in Python, Basics of Programming in Python, Principles of Object-oriented Programming (OOP), Connecting to SQLite Database, Developing a GUI with PyQT, Application of Python in Various Disciplines, and The Final Project modules.

Sachin scored 100% marks in the final assessment and is a top performer in the training.

We wish Sachin all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

For certificate authentication, please visit https://trainings.internshala.com/verify_certificate



Certificate of Training

Sachin PAL

from HERITAGE INSTITUTE OF TECHNOLOGY KOLKATA has successfully completed a 6-week online training on **Programming with Python**. The training consisted of Introduction to Python, Using Variables in Python, Basics of Programming in Python, Principles of Object-oriented Programming (OOP), Connecting to SQLite Database, Developing a GUI with PyQT, Application of Python in Various Disciplines, and The Final Project modules.

Sachin scored 100% marks in the final assessment and is a top performer in the training.

We wish Sachin all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

For certificate authentication, please visit https://trainings.internshala.com/verify_certificate









Certificate of Competency Program



INDUSTRIAL TRAINING CERTIFICATE

This certificate is awarded to

AVIRUP KAR

of

HERITAGE INSTITUTE OF TECHNOLOGY

for successfully completing the Industrial Training on

ELECTRICAL CAD ECAD

from 07/Sep/2021 to 30/Sep/2021

and implementing the project titled

11KV TRANSFER CROSS SECTIONAL AND ELEVATION DESIGN
THROUGH E-CAD



Director Operations







राष्ट्रीय इस्पात निगम लिमिटेड Rashtriya Ispat Nigam Limited विशाखापत्तनम इस्पात संयंत्र Visakhapatnam Steel Plant तकनीकी प्रशिक्षण केंद्र, Technical training Institute विशाखापत्तनम Visakhapatanam-530031

Reg.No.: 100004857

प्रमाणपत्र Certificate

प्रमाणित किया जाता है कि श्री /This is to certify that Mr./Ms. ANASHUA AICH student of

(वर्ष/पाठ्यक्रम/शाखा-Year/course/Branch) 4/BE/B TECH/EEE/ELECTRICAL विदयार्थी ने from

HHERITAGE INSTITUTE OF TECHNOLOGY ₹ has undergone

4 Week प्रशिक्षण training विशाखापत्तनम इस्पात

संयंत्र के at Visakhapatnam Steel Plant in COKE OVEN & COAL CHEMICALS PLANT (CO&CCP) विभागों मे

department from दि. 13-09-2021 से to 09-10-2021 प्राप्त तक किया।

परियोजना शीर्षक The Project Title is **REGULATION OF CONTROL SYSTEMS BY USING PLC** है। प्रशिक्षण अवधि में उनका आचरण His/Her conduct during the period of training is **GOOD**है|

स्थल/Place : Visahkhapatnam

दि./Date: 20-10-2021

प्राणिक्षण समन्वयंक का हस्ताक्षर Signature of Training Co-Ordinator एम गर्जेण बाबु/M Ganash Babu सहायक महापूर्वरक गाविकाल

सहायक महाप्रबंधक (प्रशिक्षण)/ Assistant General Manager (Training) तकनीकी प्रशिक्षण संस्थान/Technical Training Institute आर आई एन एस-विकासपट्टणम इस्पात संयंत्र/RINL-Visakhapatnam Steel Hin

विशाखपहणम् – 530031/Visakhapatnam-530031

Date of Achievement: 2021-09-19







INDUSTRIAL INTERNSHIP CERTIFICATE

This certificate is awarded to

SANDIPAN PANJA

of

HERITAGE INSTITUTE OF TECHNOLOGY

for successfully completing the Industrial Internship on

PLC AND SCADA

from 19/Aug/2021 to 19/Sep/2021

and implementing the project titled

PLC BASED SEQUENTIAL MOTOR CONTROLLING SYSTEM

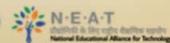












Director Technology Services

Director Operations



INDUSTRIAL TRAINING CERTIFICATE

This certificate is awarded to

SANDIPAN PANJA

of

HERITAGE INSTITUTE OF TECHNOLOGY

for successfully completing the Industrial Training on
PLC AND SCADA

from 19/Aug/2021 to 19/Sep/2021

and implementing the project titled

PLC BASED SEQUENTIAL MOTOR CONTROLLING SYSTEM









Director
Technology Services







To Whom It May Concern

This is to certify that SANDIPAN PANJA has completed the project titled PLC BASED SEQUENTIAL MOTOR CONTROLLING SYSTEM under the guidance of the technical team of Ardent Computech Pvt. Ltd. from 19/Aug/2021 to 19/Sep/2021.

We observed that the work met all the given requirements and we appreciate the sincere learning. The performance and conduct during the training and internship is outstanding. Our best wishes for all the future endeavours.

Thanks and Regards,

Rde Sankan

Digitally Signed on 45.250.244.112-211208095210

Rajmohan De Sarkar

Director - Technology Services

Ardent Computech Pvt. Ltd. (ISO 9001:2015 Company)



Date: 19/Sep/2021

© 033 4007 3507 training@ardentcollaborations.com

WWW.ARDENTCOLLABORATIONS.COM

Module No-132, Gr. Floor, SDF Building, Sector-V, Salt Lake, Kolkata-700091



"Knowledge is power, Power leads to growth, growth is life"

To Whom It May Concern

This is to certify that SANDIPAN PANJA, a student of HERITAGE INSTITUTE OF TECHNOLOGY has successfully completed the Internship Program at Ardent Computech Pvt. Ltd. on PLC AND SCADA and implemented the project titled PLC BASED SEQUENTIAL MOTOR CONTROLLING SYSTEM from 19/Aug/2021 to 19/Sep/2021.

During the internship period, we found the overall performance and conduct was outstanding in all the projects that was assigned. SANDIPAN PANJA was punctual and hardworking.

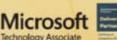
Best wishes from Ardent Computech Pvt Ltd.

Thanks and Regards,

INDRANIL DE SARKAR

Director-HR ARDENT COMPUTECH PVT LTD

Date: 19/Sep/2021













Module No-132, Gr. Floor, SDF Building, Sector-V, Salt Lake, Kolkata- 700091



"Knowledge is power, Power leads to growth, growth is life"

To Whom It May Concern

This is to certify that ABHISHEK GHOSHAL, a student of HERITAGE INSTITUTE OF TECHNOLOGY has successfully completed the Internship Program at Ardent Computech Pvt. Ltd. on PLC AND SCADA and implemented the project titled PLC BASED SEQUENTIAL MOTOR CONTROLLING SYSTEM from 19/Aug/2021 to 19/Sep/2021.

During the internship period, we found the overall performance and conduct was outstanding in all the projects that was assigned. ABHISHEK GHOSHAL was punctual and hardworking.

Best wishes from Ardent Computech Pvt Ltd.

Thanks and Regards,

INDRANIL DE SARKAR Director-HR

ARDENT COMPUTECH PVT LTD

Date: 19/Sep/2021





www.ardentcollaborations.com













To Whom It May Concern

This is to certify that ABHISHEK GHOSHAL has completed the project titled PLC BASED SEQUENTIAL MOTOR CONTROLLING SYSTEM under the guidance of the technical team of Ardent Computech Pvt. Ltd. from 19/Aug/2021 to 19/Sep/2021.

We observed that the work met all the given requirements and we appreciate the sincere learning. The performance and conduct during the training and internship is outstanding. Our best wishes for all the future endeavours.

Thanks and Regards,

Rde San Ican Digitally Signed on 157.43.215.121-211124113931

Raimohan De Sarkar

Director - Technology Services

Ardent Computech Pvt. Ltd. (ISO 9001:2015 Company)



Date: 19/Sep/2021

© 033 4007 3507

training@ardentcollaborations.com

WWW.ARDENTCOLLABORATIONS.COM

Module No-132, Gr. Floor, SDF Building, Sector-V, Salt Lake, Kolkata-700091









Competency Program

Director Technology Services

INDUSTRIAL TRAINING CERTIFICATE

This certificate is awarded to

ABHISHEK GHOSHAL

of

HERITAGE INSTITUTE OF TECHNOLOGY

for successfully completing the Industrial Training on

PLC AND SCADA

from 19/Aug/2021 to 19/Sep/2021

and implementing the project titled

PLC BASED SEQUENTIAL MOTOR CONTROLLING SYSTEM



Director Operations

INDUSTRIAL INTERNSHIP CERTIFICATE

This certificate is awarded to

ABHISHEK GHOSHAL

of

HERITAGE INSTITUTE OF TECHNOLOGY

for successfully completing the Industrial Internship on

PLC AND SCADA

from 19/Aug/2021 to 19/Sep/2021

and implementing the project titled

PLC BASED SEQUENTIAL MOTOR CONTROLLING SYSTEM









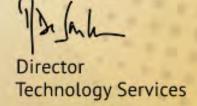


















HRD:108:10005206 28-Sep-2021

TO WHOM IT MAY CONCERN

This is to certify that Mr. Aritra Das, a 3rd year B.Tech. student of Heritage Institute of Technology, underwent Vacational Training in Information Technology of CESC Limited from 30-AUG-21 to 25-SEP-21.

During the period of training his conduct was good and progress was satisfactory.

Dy. General Manager



Certificate of Training

Santosh Kumar

from Heritage Institute of Technology, Kolkata, has successfully completed a six weeks online training on **AutoCAD**. The training consisted of Interface, Drawing Aids & Basic Objects, Complex Objects & Object editing, Blocks & Annotations, Plotting & Introduction to 3D and The Final Project modules.

Santosh scored 95% marks in the final assessment and is a top performer in the training.

We wish Santosh all the best for the future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-09-06 Certificate no.: 8ABEC8C4-A77F-EE65-7077-552120B7EF4D

For certificate authentication, please visit https://trainings.internshala.com/verify_certificate



Certificate of Training

Md Shahzad Ahmad

from Heritage Institute of Technology has successfully completed a 6-week online training on **AutoCAD**. The training consisted of Interface, Drawing Aids & Basic Objects, Complex Objects & Object editing, Blocks & Annotations, Plotting & Introduction to 3D, and The Final Project modules.

Md Shahzad is a top performer in the training.

We wish Md Shahzad all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-09-06 Certificate no.: B9C9E604-E0E8-A369-AAC1-7DE8D5998BCF

For certificate authentication, please visit https://trainings.internshala.com/verify_certificate

Bosch Training Centre Certificate





2928

Rahul Bhattacharyya

from

Heritage institute of technology

has attended

A training programme on Vehicle System Basics and newer technologies

in Diesel & Gasoline Injection systems & Auto Electricals

From 30.08.2021 to 28.09.2021

at

MCKV - Bosch JCC, Howrah

and has successfully acquired the best of theoretical and practical knowledge.

Samigan An

Sand Knun Shah.

Bosch Training Centre Certificate





2867

Rishab Pal

from

Heritage institute of technology

has attended

A training programme on Vehicle System Basics and newer technologies

in Diesel & Gasoline Injection systems & Auto Electricals

From 30.08.2021 to 28.09.2021

at

MCKV - Bosch JCC, Howrah

and has successfully acquired the best of theoretical and practical knowledge.

Training Manager

sampl Knuzghah.

Trainer

Bosch Training Centre Certificate





2867

Rishab Pal

from

Heritage institute of technology

has attended

A training programme on Vehicle System Basics and newer technologies

in Diesel & Gasoline Injection systems & Auto Electricals

From 30.08.2021 to 28.09.2021

at

MCKV - Bosch JCC, Howrah

and has successfully acquired the best of theoretical and practical knowledge.

Training Manager

sampl Knuzghah.

Trainer









Certificate of Competency Program Director Technology Services

INDUSTRIAL TRAINING CERTIFICATE

This certificate is awarded to SOURAV MISHRA

of

HERITAGE INSTITUTE OF TECHNOLOGY

for successfully completing the Industrial Training on

INDUSTRIAL AUTOMATION WITH PLC

from 19/Aug/2021 to 19/Sep/2021

and implementing the project titled

PLC BASED SEQUENTIAL MOTOR CONTROLLING SYSTEM



Director Operations

INDUSTRIAL INTERNSHIP CERTIFICATE

This certificate is awarded to

SOURAV MISHRA

of

HERITAGE INSTITUTE OF TECHNOLOGY

for successfully completing the Industrial Internship on

INDUSTRIAL AUTOMATION WITH PLC

from 19/Aug/2021 to 19/Sep/2021

and implementing the project titled

PLC BASED SEQUENTIAL MOTOR CONTROLLING SYSTEM









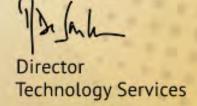






















Certificate of Competency Program Director
Technology Services

INDUSTRIAL TRAINING CERTIFICATE

This certificate is awarded to

SUPARNA PATHAK

of

HERITAGE INSTITUTE OF TECHNOLOGY

for successfully completing the Industrial Training on

EMBEDDED SYSTEMS AND ROBOTICS

from 30/Aug/2021 to 01/Oct/2021



Director Operations









Certificate of Competency Program Director
Technology Services

INDUSTRIAL TRAINING CERTIFICATE

This certificate is awarded to

SUPARNA PATHAK

of

HERITAGE INSTITUTE OF TECHNOLOGY

for successfully completing the Industrial Training on

EMBEDDED SYSTEMS AND ROBOTICS

from 30/Aug/2021 to 01/Oct/2021



Director Operations









Certificate of Competency Program Director Technology Services

INDUSTRIAL TRAINING CERTIFICATE

This certificate is awarded to

WASEEM AHMED TANTRY

of

HERITAGE INSTITUTE OF TECHNOLOGY

for successfully completing the Industrial Training on

ELECTRICAL CAD ECAD

from 07/Sep/2021 to 30/Sep/2021

and implementing the project titled

11KV TRANSFER CROSS SECTIONAL AND ELEVATION DESIGN
THROUGH E-CAD



Director

THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED (A Government of West Bengal Enterprise)



BIDYUT UNNAYAN BHABAN CORP. OFFICE, KOLKATA

Certificate of Training

Date: 30.04.2021

(BISWAPRIYA GUHA)
General Manager (HR&A)
Corporate WBPDCL





Certificate of Completion

11/06/2021 to 26/08/2021

This certificate is hereby awarded to

RAKTIM DUTTA

HERITAGE INSTITUTE OF TECHNOLOGY, KOLKATA

who has successfully completed the SKILL DEVELOPMENT TRAINING on the subject

CAMPUS RECRUITMENT TRAINING

by following all the necessary criteria of the Company.



Date of Issue: 26/08/2021

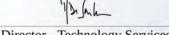


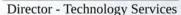




CERTIFIED ASSOCIATE









ARDENT COMPUTECH PVT. LTD.

www.ardentcollaborations.com

Module - 132, Ground Floor, SDF Building, Salt Lake, Sector V, Block GP, Kolkata - 700091





TO WHOM IT MAY CONCERN

This is to certifu that Sri / Sn	nt. RAHUL CHAUDHURI	
Son / Daughter of Sri / Late	JAYANTA CHAUDHURI	
a student of 7TH	semester / year ELECTRICAL ENG	(Stream) of Institute
HERITAGE INSTITUT	TE OF TECHNOLOGY has	undergone unpaid short term
Practical Training with effect from	1 - 10	at Technical Training
Centre / CLW / Chittaranjan He / She has completed the tro	aining successfully and his / her performance is foun	d satisfactory.
I wish him	n / her every success in life.	
	Princ Technical Trai	प्राचार्य ipal Principal ning Centræजिनकी प्रशिक्षण केन्द्र ARAN achn ical Training

CLW. / CHITTARANJAN

INDUSTRIAL INTERNSHIP CERTIFICATE

This certificate is awarded to

TATHAGATA

of

HERITAGE INSTITUTE OF TECHNOLOGY

for successfully completing the Industrial Internship on

INDUSTRIAL AUTOMATION WITH PLC

from 19/Aug/2021 to 19/Sep/2021

and implementing the project titled

PLC BASED SEQUENTIAL MOTOR CONTROLLING SYSTEM









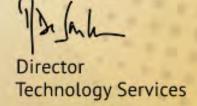
















EASTERN COALFIELDS LIMITED

(A Subsidiary of Coal India Limited)

Office of the Dy.GM(MIN)/Agent, Pandaveswar Colliery

P.O. – Pandaveswar, Dist - Burdwan (W.B.), Pin – 713346

FAX 0341-2677-367, ph no:0341-2677602 E-Mail: pandaveswarcolliery@gmail.com

Ref. No. Pand/MGR/21/ 1384

Dated: 01.10.2021

TO WHOM IT MAY CONCERN

This is to certify that Sri ABHISHEK GHOSHAL, Son of ANANDA LAL GHOSHAL, student of Heritage Institute of Technology, Kolkata was engaged in Vocational Training/ Internship and have successfully completed 01 (one) month of Vocational Training/ Internship at Pandaveswar Colliery (underground) vide letter No ECL/HRD/DIS/VT/2021/255 dated: 18.08.2021 by General Manager (HRD), subsequent letter No: GM/PND/ATO/21-22/891, dated: 25.08.2021 of Area Safety Officer, Pandaveswar Area and further letter No: PAND/AGT/21/1134, dated: 30.08.2021 by Agent, Pandaveswar Colliery from 30.08.2021 to 29.09.2021 in Electrical discipline.

He has completed his job and gained knowledge in various electrical installation and maintenance related works of electrical appliances such as follows: -

- Underground coal drilling panel and drill machines starters.
- Electrical Layout of Pandaveswar Colliery
- Maintenance & charging of various transformer
- SDL (Side Discharge loader)
- · Cable joint (PVC armored cable, SDL trailing cable and drill cable) process.
- · Identification of Cable fault in SDL and rectification of the same.
- · BDV and Oil filtration of Transformers
- Short-circuit & Open circuit test of transformers
- · Various Motors & Starters.

(Note :- He always deployed to work under strict supervision of Electrical supervisor)

During the training period he was a hardworking and sincere towards his duties. He is a man of good moral character and I wish him all the success in life.

Manager (Min.)/Manager

Pandaveswar Colliery

MANAGER
PANDAVESWAR COLLIERY

Safety Officer

Pandaveswar Colliery

SAFETY OFFICER Pandaveswar Colliery Colliery Engineer

Pandaveswar Colliery

COLLIERY ENGINEER PANDAVESWAR COLLIERY

RECOMMENDATION LETTER

TO WHOM IT MAY CONCERN

Date: - 4th October 2021

Subject: - Letter of Recommendation/Reference Letter

Dear Sir/ Madam

I would like to recommend ABHISHEK GHOSHAL, Son of ANANDA LAL GHOSHAL as a candidate for the position with your organization. He was engaged in Vocational Training/ Internship in our company for duration of 1 month (30.08.2021 to 29.09.2021). During his tenure in our office he did an satisfactory job and he indeed is an asset to any organization. He posses good knowledge in the field of Electrical Engineering. He is very hardworking & dedicated towards his work. He is friendly with good communication skills. He completes the project in a time bounded manner.

He would be an asset to any employer & I recommend him for any endeavor he chooses to pursue.

Sincerely,

ASHISH ANAND

ASST. MANAGER

MAN NO. 90303082

EASTERN COALFIELDS LTD.

PANDAVESWAR AREA

9434796060

ashishanandktd@gmail.com

RECOMMENDATION LETTER

TO WHOM IT MAY CONCERN

Date: - 5th October 2021

Subject: - Letter of Recommendation/Reference Letter

Dear Sir/ Madam

I would like to recommend ABHISHEK GHOSHAL, Son of MR. ANANDA LAL GHOSHAL as a candidate for the position with your organization. He was engaged in Vocational Training/ Internship in our company for duration of 1 month (30.08.2021 to 29.09.2021). During his tenure in our office he did an excellent job and he indeed is an asset to any organization. He posses good knowledge in the field of Electrical Engineering. He is very hardworking & dedicated towards his work. He is friendly with good communication skills. He completes the project in a time bounded manner.

He would be an asset to any employer & I recommend him for any endeavor he chooses to pursue.

Sincerely,

ABINASH KUMAR SINGH

ASST. MANAGER (E&M)

MAN NO. 90347964

EASTERN COALFIELDS LTD.

PANDAVESWAR AREA

8535840503

sendtoabinash@gmail.com

COLLIERY ENGINEER PANDAVESWAR COLLIERY



EASTERN COALFIELDS LIMITED

(A Subsidiary of Coal India Limited)

Office of the Dy.GM(MIN)/Agent, Pandaveswar Colliery

P.O. – Pandaveswar, Dist - Burdwan (W.B.), Pin – 713346

FAX 0341-2677-367, ph no:0341-2677602 E-Mail: pandaveswarcolliery@gmail.com

Ref. No. Pand/MGR/21/ 1384

Dated: 01.10.2021

TO WHOM IT MAY CONCERN

This is to certify that Sri ABHISHEK GHOSHAL, Son of ANANDA LAL GHOSHAL, student of Heritage Institute of Technology, Kolkata was engaged in Vocational Training/ Internship and have successfully completed 01 (one) month of Vocational Training/ Internship at Pandaveswar Colliery (underground) vide letter No ECL/HRD/DIS/VT/2021/255 dated: 18.08.2021 by General Manager (HRD), subsequent letter No: GM/PND/ATO/21-22/891, dated: 25.08.2021 of Area Safety Officer, Pandaveswar Area and further letter No: PAND/AGT/21/1134, dated: 30.08.2021 by Agent, Pandaveswar Colliery from 30.08.2021 to 29.09.2021 in Electrical discipline.

He has completed his job and gained knowledge in various electrical installation and maintenance related works of electrical appliances such as follows: -

- Underground coal drilling panel and drill machines starters.
- Electrical Layout of Pandaveswar Colliery
- Maintenance & charging of various transformer
- SDL (Side Discharge loader)
- · Cable joint (PVC armored cable, SDL trailing cable and drill cable) process.
- · Identification of Cable fault in SDL and rectification of the same.
- · BDV and Oil filtration of Transformers
- Short-circuit & Open circuit test of transformers
- · Various Motors & Starters.

(Note :- He always deployed to work under strict supervision of Electrical supervisor)

During the training period he was a hardworking and sincere towards his duties. He is a man of good moral character and I wish him all the success in life.

Manager (Min.)/Manager

Pandaveswar Colliery

MANAGER
PANDAVESWAR COLLIERY

Safety Officer

Pandaveswar Colliery

SAFETY OFFICER Pandaveswar Colliery Colliery Engineer

Pandaveswar Colliery

COLLIERY ENGINEER PANDAVESWAR COLLIERY

RECOMMENDATION LETTER

TO WHOM IT MAY CONCERN

Date: - 4th October 2021

Subject: - Letter of Recommendation/Reference Letter

Dear Sir/ Madam

I would like to recommend ABHISHEK GHOSHAL, Son of ANANDA LAL GHOSHAL as a candidate for the position with your organization. He was engaged in Vocational Training/ Internship in our company for duration of 1 month (30.08.2021 to 29.09.2021). During his tenure in our office he did an satisfactory job and he indeed is an asset to any organization. He posses good knowledge in the field of Electrical Engineering. He is very hardworking & dedicated towards his work. He is friendly with good communication skills. He completes the project in a time bounded manner.

He would be an asset to any employer & I recommend him for any endeavor he chooses to pursue.

Sincerely,

ASHISH ANAND

ASST. MANAGER

MAN NO. 90303082

EASTERN COALFIELDS LTD.

PANDAVESWAR AREA

9434796060

ashishanandktd@gmail.com

RECOMMENDATION LETTER

TO WHOM IT MAY CONCERN

Date: - 5th October 2021

Subject: - Letter of Recommendation/Reference Letter

Dear Sir/ Madam

I would like to recommend ABHISHEK GHOSHAL, Son of MR. ANANDA LAL GHOSHAL as a candidate for the position with your organization. He was engaged in Vocational Training/ Internship in our company for duration of 1 month (30.08.2021 to 29.09.2021). During his tenure in our office he did an excellent job and he indeed is an asset to any organization. He posses good knowledge in the field of Electrical Engineering. He is very hardworking & dedicated towards his work. He is friendly with good communication skills. He completes the project in a time bounded manner.

He would be an asset to any employer & I recommend him for any endeavor he chooses to pursue.

Sincerely,

ABINASH KUMAR SINGH

ASST. MANAGER (E&M)

MAN NO. 90347964

EASTERN COALFIELDS LTD.

PANDAVESWAR AREA

8535840503

sendtoabinash@gmail.com

COLLIERY ENGINEER PANDAVESWAR COLLIERY



EASTERN COALFIELDS LIMITED

(A Subsidiary of Coal India Limited) Office of the Dy.GM(MIN)/Agent, Pandaveswar Colliery P.O. - Pandaveswar, Dist - Burdwan (W.B.), Pin - 713346

FAX 0341-2677-367, ph no:0341-2677602

E-Mail: pandaveswarcolliery@gmail.com

Dated: 01.10.2021

<u>Ref.No.Pand/MGR/21/</u> **1385**

TO WHOM IT MAY CONCERN

This is to certify that Sri SANDIPAN PANJA, Son of PRADIP PANJA, student of Heritage Institute of Technology, Kolkata was engaged in Vocational Training/ Internship and have successfully completed 01 (one) month of Vocational Training/ Internship Pandaveswar Colliery (underground) vide letter ECL/HRD/DIS/VT/2021/255 dated: 18.08.2021 by General Manager (HRD), subsequent letter No: GM/PND/ATO/21-22/891, dated: 25.08.2021 of Area Safety Officer, Pandaveswar Area and further letter No: PAND/AGT/21/1134, dated: 30.08.2021 by Agent, Pandaveswar Colliery from 30.08.2021 to 29.09.2021 in Electrical discipline.

He has completed his job and gained knowledge in various electrical installation and maintenance related works of electrical appliances such as follows: -

- Underground coal drilling panel and drill machines starters.
- Electrical Layout of Pandaveswar Colliery
- Maintenance & charging of various transformer
- SDL (Side Discharge loader)
- · Cable joint (PVC armored cable, SDL trailing cable and drill cable) process.
- Identification of Cable fault in SDL and rectification of the same.
- · BDV and Oil filtration of Transformers
- Short-circuit & Open circuit test of transformers
- Various Motors & Starters.

(Note :- He always deployed to work under strict supervision of Electrical supervisor)

During the training period he was a hardworking and sincere towards his duties. He is a man of good moral character and I wish him all the success in life.

Manager (Min.)/Manager

Pandaveswar Colliery

Pandaveswar Colliery

SAFETY OFFICER Pandaveswar Colliery

Colliery Engineer

Pandaveswar Colliery

RECOMMENDATION LETTER

TO WHOM IT MAY CONCERN

Date: - 5th October 2021

Subject: - Letter of Recommendation/Reference Letter

Dear Sir/ Madam

I would like to recommend SANDIPAN PANJA, Son of MR.PRADIP PANJA as a candidate for the position with your organization. He was engaged in Vocational Training/ Internship in our company for duration of 1 month (30.08.2021 to 29.09.2021). During his tenure in our office he did an excellent job and he indeed is an asset to any organization. He posses good knowledge in the field of Electrical Engineering. He is very hardworking & dedicated towards his work. He is friendly with good communication skills. He completes the project in a time bounded manner.

He would be an asset to any employer & I recommend him for any endeavor he chooses to pursue.

Sincerely,

ABINASH KUMAR SINGH

ASST. MANAGER (E&M)

MAN NO. 90347964

EASTERN COALFIELDS LTD.

PANDAVESWAR AREA

8535840503

sendtoabinash@gmall.com

COLLIERY ENGINEER PANDAVESWAR COLLIERY

RECOMMENDATION LETTER

TO WHOM IT MAY CONCERN

Date: - 4th October 2021

Subject: - Letter of Recommendation/Reference Letter

Dear Sir/ Madam

I would like to recommend SANDIPAN PANJA, Son of PRADIP PANJA as a candidate for the position with your organization. He was engaged in Vocational Training/ Internship in our company for duration of 1 month (30.08.2021 to 29.09.2021). During his tenure in our office he did an satisfactory job and he indeed is an asset to any organization. He posses good knowledge in the field of Electrical Engineering. He is very hardworking & dedicated towards his work. He is friendly with good communication skills. He completes the project in a time bounded manner.

He would be an asset to any employer & I recommend him for any endeavor he chooses to pursue.

Sincerely,

ASHISH ANAND

ASST. MANAGER

MAN NO. 90303082

EASTERN COALFIELDS LTD.

PANDAVESWAR AREA

9434796060

ashishanandktd@gmail.com



Skill India Internship

Certificate of Completion to

Shiv Prakash

——for completing 1-month internship on—

Python For ML/Al Internship

In this one-month program, you've shown grit, patience, curiosity and hard-work to learn skills that are important in Industry. And, this is just the start of journey to your dream career. Make your dream come true.

Keep Learning, Keep Exploring!

We wish you all the best for your future

S. No: ETGSI11663

Mayank Arora
CEO & Founder

mel ou

Date of Issue: 29th Sept 2021







ELECTRIC LOCO SHED || HOWRAN EASTERN RAILWAY

P.O.: - Salkia , District :- Howrak , PM :- 711106 Phone- (033) 2651 6854 , Tele Fax –2651 6854(BSML). Railway:- 23202 & 23203

Eastern Railway

Ref. No.: - ELS/TRS/HWH/V-Trg./C.C/16

Howrah, the Oct'2021

To, Principal Heritage Institute of Technology 994 Madurdaha Chowbaga Road, Anandapur KOLKATA-700107 (West Bengal,INDIA)

> Sub: - Short Term Vocational / Industrial Training (UN Paid) of Engineering Students during winter for the year 2021-2022.

Ref: - Your Letter No:-HITEE/22 Dated- 28/09/2021

Waseem Ahmed Tantry, in Electrical Engineering of your institution has been imparted vocational training from 30.09.2021 to 22.10.2021, Except Sunday & Holiday at Electric Loco Shed, Eastern Railway, Howrah under Traction Rolling Stock/Eastern Railway, HOWRAH.

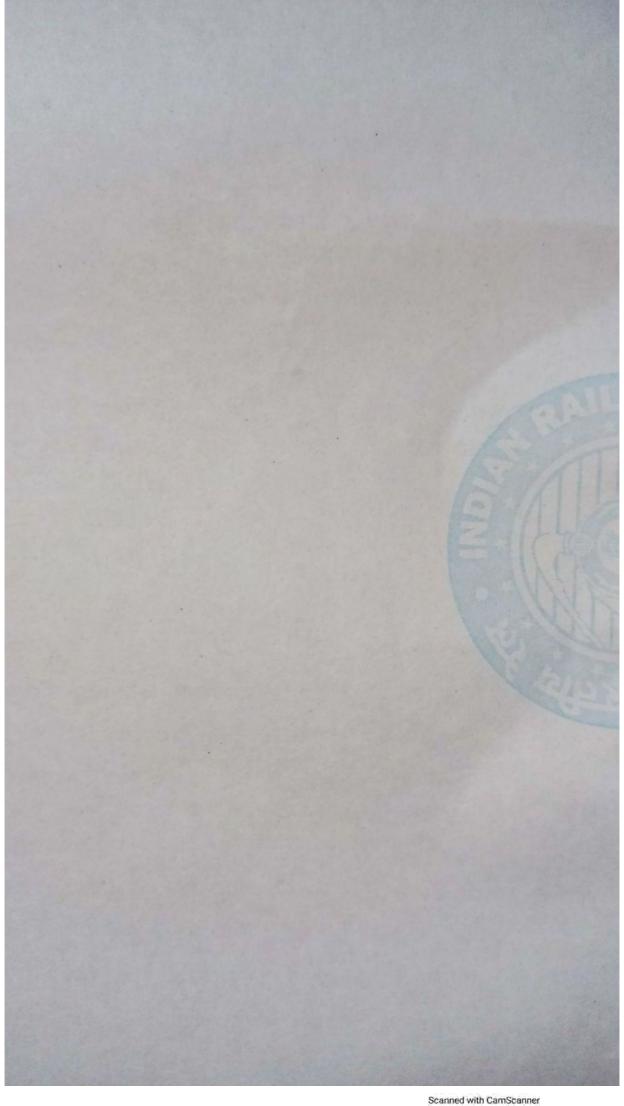
During this period , he has been imparted training in different electrical sections of Electric Loco Shed/ Howrah, Eastern Railway for gathering knowledge about, Transformer , Tap Changer, Traction Motor, Various type of Relays & Switches, Power Circuit, Auxiliary Circuit, Control Circuit, Auxiliary Motor, Speedo meter cards including Battery & Pantograph etc.

He has completed the above training successfully and I wish him success in life.

(Kamalesh Sarkar)

Divisional Electrical Engineer/TRS Electric Loco Shed, Eastern Railway, HOWRAH

> Divisional Electrical Engineer/ T.R.S. Electric Loco Shod, Eastern Reliney, Mowan



Industrial Training Certificate





This certificate is awarded to

ADITYA KASHYAP

of

HERITAGE INSTITUTE OF TECHNOLOGY

for successfully completing the Industrial Training on

MATLAB & IT'S APPLICATIONS

from

Aug 5 to Oct 3, 2021 (40 Hours)
and implementing the project titled

3 PHASE FULL CONTROL BRIDGE CONTROLLER

Certificate ID: TG/20211021 Issue Date: Oct 3, 2021











Director
Technology Services











Microsoft Technology Associate



Certificate of Competency Program Director Technology Services

INDUSTRIAL TRAINING CERTIFICATE

This certificate is awarded to

SOURADEEP HALDER

of

HERITAGE INSTITUTE OF TECHNOLOGY, KOLKATA

for successfully completing the Industrial Training on

ELECTRICAL CAD ECAD

from 07/Sep/2021 to 30/Sep/2021

and implementing the project titled

11KV TRANSFER CROSS SECTIONAL AND ELEVATION DESIGN THROUGH E-CAD



Director Operations



Certificate of Training

Abhishek Kumar

from HERITAGE INSTITUTE OF TECHNOLOGY has successfully completed a 6-week online training on **React**The training consisted of Introduction, Tic Tac Toe Game, Box Office App, Chat Application, Custom Backend,
and Assignment & Summary modules.

In the final assessment, Abhishek scored 80% marks.

We wish Abhishek all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-09-26

For certificate authentication, please visit https://trainings.internshala.com/verify_certificate



INDUSTRIAL TRAINING REPORT

NAME:-Abhishek Kumar

Roll No:- 1859029

DEPT:- **EE**

Acknowledgement

First I would like to thank Internshala for giving me the opportunity to do an internship training on React. I would like to thank my Head of the Department Prof. (Dr.) Prabir Banerjee for allowing me to do the summer training.

I am extremely great full to my friends who helped me in successful completion of this training.

Abstract

Web development refers to building website and deploying on the web. Web development requires use of scripting languages both at the server end as well as at client end.

It is of no surprise that human/machine interaction is a popular topic of research and development, as is the main goal at the Internshala training, where I had the honour to spend my first training period.

Web development process includes all the steps that are good to take to build an attractive, effective and responsive website. While web development typically refers to web markup and coding, it includes all related development tasks, such as client-side scripting, server-side scripting, server and network security configuration, ecommerce development, and content management system (CMS) development.

Taking into account web standards and the backend and front-end architecture of web development, a method for providing a multilanguage web interface has been planned from scratch and explained in details in this report.

INDEX

S.NO	CONTENTS	PAGE NO.
1.	Introduction	1
2.	Module Description	2
3.	Prerequisite	3
4.	Overview	6
5.	First Project	9
6.	Second Project	13
7.	Third Project	16
8.	Conclusion	19

1. INTRODUCTION

The training focused on overall knowledge improvement of the front end development using various concepts linked with HTML, CSS, JS and how react can be used as a library to build user interfaces for web. It also dealt with small related concepts of modern javascript like array map, array reduce, function expression, arrow functions, object and array destructuring etc.

The basic concepts of react were introduced from the scratch including virtual dom, components, nesting of components, states, hooks etc.

Also while doing the project a bit of git and github was introduced like how to initialise a project, how to do commits, how to use branches to work in a parallel environment and the cloning and merging and pulling of github repositories.

Since the projects were made using the node js environment using npm i.e. node packet manager and was done in the integrated development environment of visual studio.

This report is a description of my 6 week training carried out as a compulsory component of the course. In the following chapters details of my activities and specific technical details about my training are given. Finally, a conclusion is drawn from the experience.

2. Modules Description:

There were total 6 modules :-

- 1. Mod 1 Introduction
- 2. Mod 2 Tic Tac Toe Game
- 3. Mod 3 Box Office App
- 4. Mod 4 Chat Application
- 5. Mod 5 Custom Backend
- 6. Mod 6 Assignment and Summary

After completing every module I have to passed the module test to go on the next module of our react training that is basically for testing our knowledge every question in test is directly related to the things I have learnt during the entire module. So, it also checked that we have made our project by ourself or not.

3. Prerequisite

Before I started learning React I want to have atleast basic understanding of web application. So, at first I learned about static web page application.

Static Website

A static website contains Web pages with fixed content. Each page is coded in HTML and displays the same information to every visitor. Static sites are the most basic type of website and are the easiest to create. Unlike dynamic websites, they do not require any Web programming or databasee design. A static site can be built by simply creating a few HTML pages and publishing them to a Web server.

Since static Web pages contain fixed code, the content of each page does not change unless it is manually updated by the webmaster. This works well for small websites, but it can make large sites with hundreds or thousands of pages difficult to maintain. Therefore, larger websites typically use dynamic pages, which can be updated by simply modifying a database record. Static sites that contain a lot of pages are often designed using templates. This makes it possible to update several pages at once, and also helps provide a consistent layout throughout the site. After having a basic understanding of web application and making some more websites

using html, CSS and JavaScript that is what I learned.

- The basics of HTML, CSS & JavaScript
- How to use HTML to create a web page with elements including headings, paragraphs, lists & images
- How to use CSS to make your web page beautiful
- How to use CSS to make your web page responsive (and look great on Desktop, Tablet & Mobile)
- The basics of CSS Flexbox layouts
- How to use JavaScript to add interactivity to your web page

<u>Difference between Static and Dynamic Web</u> <u>Pages:-</u>

SL.NO	Static Web Page	Dynamic Web Page
1	In static web pages, Pages will remain same until someone changes it manually.	In dynamic web pages, Content of pages are different for different visitors.
2	Static Web Pages are simple in terms of complexity.	Dynamic web pages are complicated.
3	In static web pages, Information are changed rarely.	In dynamic web page, Information are changed frequently.
4	Static Web Page takes less time for loading than dynamic web page.	Dynamic web page takes more time for loading.
5	In Static Web Pages, database is not used.	In dynamic web pages, database is used.
6	Static web pages are written in languages such as: HTML, JavaScript, CSS, etc	Dynamic web pages are written in languages such as: CGI, AJAX, ASP, ASP.NET, etc.
7	Static web pages does not contain any application program .	Dynamic web pages contains application program for different services.
8	Static web pages require less work and cost in designing them.	Dynamic web pages require comparatively more work and cost in designing them

4. Overview :-

Web development is also a rapidly expanding industry. Between now and 2028, the employment of web developers is expected to grow by 13%. That's much faster than most other technology careers. So the question might arise is **Why is web development important?**

The internet isn't going away anytime soon. In fact, it's become a portal and primary method of research, connection, education, and entertainment in the world. Peoples are using the internet for a vast variety of reasons. What's the one thing those reasons have in common? They require a website, and each website requires a skille

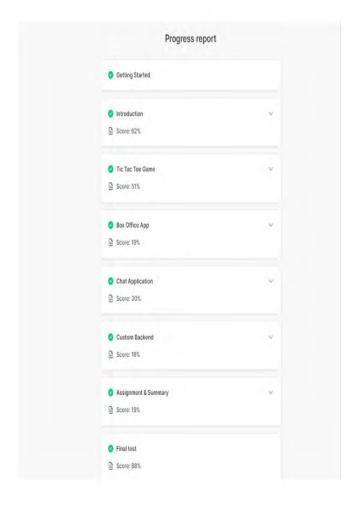
Web development is the work involved in developing a website for the Internet (World Wide Web) or an intranet (a private network). Web development can range from developing a simple single static page of plain text to complex web applications, electronic businesses, and social network services. A more comprehensive list of tasks to which Web development commonly refers, may include Web engineering, Web design, Web content development, client liaison, client-side/server-side scripting, Web server and network security configuration, and e-commerce development.

Web development may be a collaborative effort between departments rather than the domain of a designateddepartment. There are three kinds of Web developer specialization: front-end developer, back-end developer, and full-stack developer. Front-end developers are responsible for behaviour and visuals that run in the user browser, while back-end developers deal with the servers. Full stack developers work in both the front-end and backend sides of a website. They can create a website, application, or software program from start to finish.

Web development has also impacted personal networking and marketing. Web sites are no longer simply tools for work or for commerce, but serve more broadly for communication and social networking. Web sites such as Facebook and Twitter provide users with a platform to communicate and organizations with a more personal and interactive way to engage the public.

Then I decided to start the learning of my first front-end framework and I took a React training from internshala.

And that is what I've learn and build during my training period of react.



At first I learn some basic things about web application and it was also a good revision of my basic knowledge because I already know some basic things about web development which I have already mentioned in this report.But I became more interested when I started building project It was very exciting for me but at the same it was quite challenging too.I have faced so many errors which I don't how to resolve at first.So, I took a lot of help from Internetspecially from stack overflow and also from my friends who are already in this field they really helped me to complete my react training.

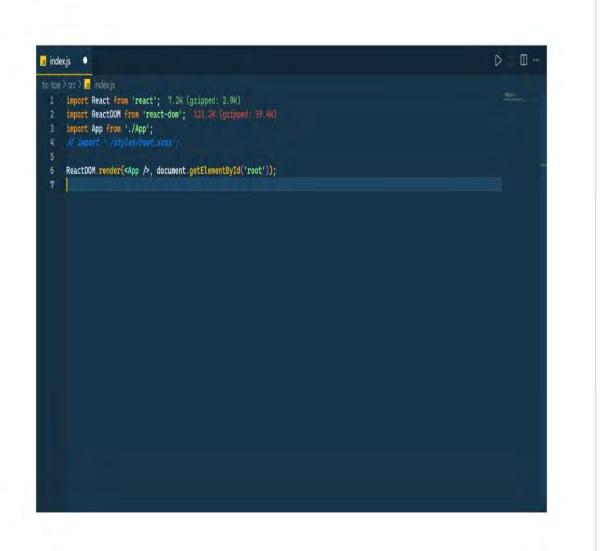
First Project :- Tic Tac Toe Game

Key aspect/learning:-

- JSX (React markup)
- Functional components
- Props
- Styling with CSS, SASS and inline styles
- React events
- Simple state management with React hook useState
- Component lifecycle events(componentDidMount/DidUpdate/WillU nmount)
- Sharing state by lifting it up
- Conditional rendering and dynamic styles
- · Deployment with surge.sh

Tic-tac-toe is played on a three-by-three grid by two players, who alternately place the marks X and O in one of the nine spaces in the grid. If the player has three clicks either diagonally, horizontally or vertically in the 9 spaces then the player is the winner. If both playerfail to do so then the game ends in a draw and you need to clear the game to start the new game.

Index.js page for tic tac toe game it is basically same for almost every react website that I made in this training.



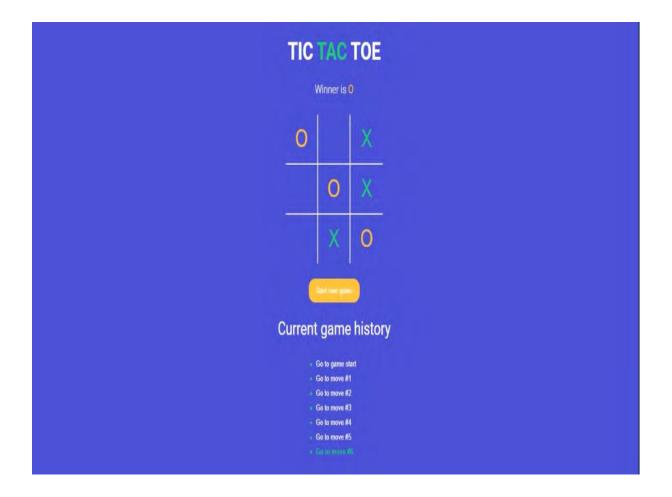
App.js page for tic tac toe project :-

```
I File Edit Selection View Go Run Terminal Help
                                                                                                                                                                                               App.js - react project - Visual Studio Code
                                                                                                                                                                                                                                                                                                                                                                                                                                                                II ...
                                                                              App.js X
                                                                                tic-toe > src > App.is > [8] App
              V OPEN EDITORS
                                                                                      1 import React, { useState } from 'react'; 7.4K (gzipped: 3K)
                                                                                                  import Board from './components/Board';
              V REACT PROJECT
                   > box-office
                                                                                     4 const App = () ⇒ [
                                                                                                      const [board, setBoard] = useState(Array(9).fill(null));
                  > ■ chatrapp
                                                                                                        const [isXNext, setIsXNext] = useState(false);
                   ∨ 🖨 tic-toe
                     ) in parcel cache.
                                                                                                         const handleSquareClick = position \Rightarrow (
                     > la dist
                                                                                                           if (board[position]) [
                     > node modules
                     V 6 5/C
                                                                                                             setBoard(prev ⇒ {
                        > components
                                                                                                                  return prev map((square, pos) = {
                         > ■ M2 T3 E3 Win...
                                                                                                                    if (pos = position) {
                       ) M2 T5 E1 Styli...
                                                                                                                             return isXNext ? 'X' : '0';
                        > styles
                                                                                                                        return square;
                              App js
                                                                                                             setIsXNext(prev = |prev);
                              kelpers.js
                                                                                                         <div className="app">
                              index,js
                                                                                                            <h1>TIC TAC TOE</h1>
                            sitignore .
                                                                                                             <h2>message</h2>
                            index.html
                                                                                                             <Board board=[board] handleSquareClick=[handleSquareClick] >>
                            package-lock ison
                            package.json

    README.md
    README.
                                                                                    38 export default App;
                                                                                                                                                                                                                                         @ Watch Sass Ln 22, Col 5 Spaces; 2 UTF-8 LF () Babel JavaScript @ Go Live ✓ Prettier ₽ □
```

Here player 0 wins.

Also when you click on the different stage of game button you get to see palyer moves of that particular stage again.

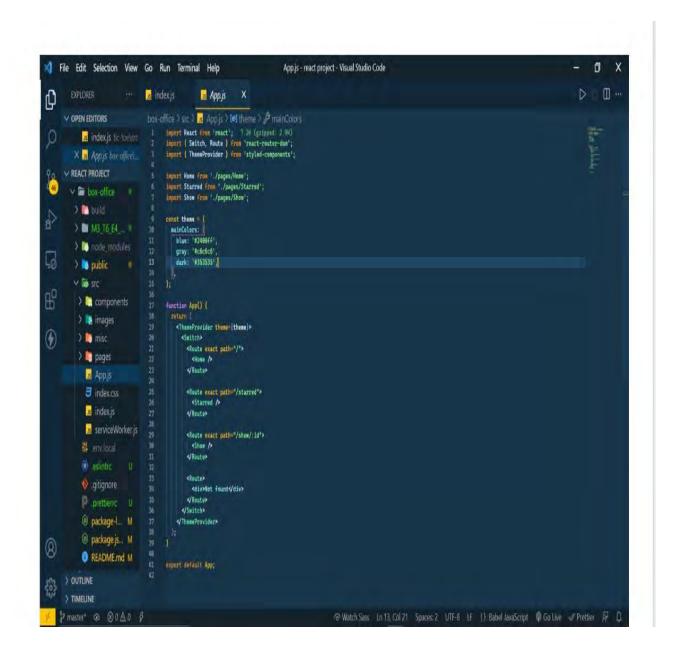


Second Project :- Box Office App

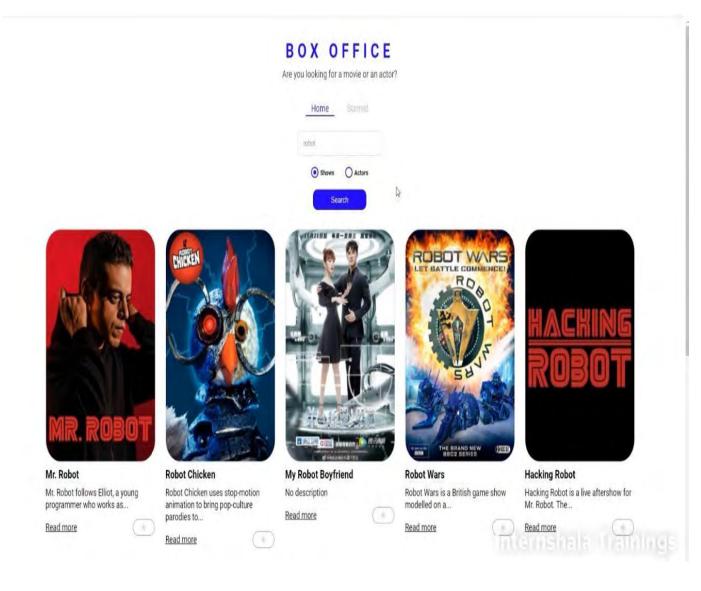
Key aspect/learning:- • Client-side routing with React Router • Per-page layout management • Querying and working with external API • Main React strategy to work with data fetching • Styled Components(Component-Scooped styles) • More React hooks: useReducer, useEffect, useCallback • Creating and

useEffect, useCallback • Creating and using custom hooks • Data persistence in Local Storage • Components optimization with React hooks and memo(avoiding rerenders) • Service workers and Progressive Web App(PWA) • Deployment with Github Pages

App.js page for Box-office app:-



Box office app:-



Third Project:- Chat Application

Key aspect/learning:- • State Management with Context API • Problems Context API facing and solution • Using React UI library • Prop drilling • Private and public React-router routes • Using external custom hooks from the web • React Firebase Integration(auth, real-time db, storage, hosting, cloud-messaging security rules) • More React hooks: useRef • Direct element manipulation with refs • Real-time background notifications • Serverless backend(theory and practice with cloud functions)

Project.json file for Chat Application :-

```
    File Edit Selection View Go Run Terminal Help

                                                                                                                                                  project.json - self practice - Visual Studio Code
EXPLORER ... () project.json X
          ∨ SELF PRACTICE
   Q vimg
                                                                    "lint": "eslint src/**/*.js",
"format": "prettier -write src/**/*.js",
"format:lint": "npm run format && npm run lint",
"clear": "rimraf build"
           wallpaper.jpg

CSS_Practice.html
 index.html

Js practcie1.js
                                                                  },
"eslintConfig": {
    "extends": "react-app"
          # practice1.css
O practice1.html
O practice2.html
                                                                "browserslist": {
    "production": [
    ">0.2%',
    "not dead",
    "not op_mini all"
 Project.json
                                                                      "development": [
"last 1 chrome version",
"last 1 firefox version",
"last 1 safari version"
                                                                   ]
},

"devOependencies": {

"babel-eslint": "^10.1.0",

"eslint-config-airbnb": "^18.1.0",

"eslint-plugin-import": "^2.20.2",

"eslint-plugin-jsx-ally": "^2.2.0",

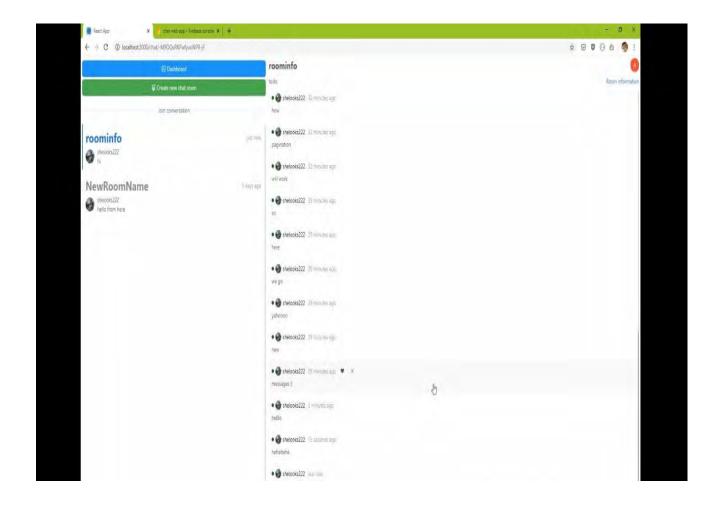
"eslint-plugin-react": "^7.20.0",

"eslint-plugin-react-hooks": "^4.0.4",

"prettier": "^2.0.5",

"imraf": "^3.0.2"
}
 Ln 59, Col 2 Spaces: 4 UTF-8 CRLF JSON 🖗 Go Live 🛱 🕻
```

Chat Application :-



Conclusion:-

In a nutshell, this training has been an excellent and rewarding experience. I can conclude that there have been a lot I've learnt from my work during entire 6 week. Needless to say, the technical aspects of the work I've done are not flawless and could be improved provided enough time.

As someone with no prior experience in JavaScript whatsoever I believe my time spent in research and discovering new languages was well worth it and contributed to finding an acceptable solution to an important aspect of web design and development. Two main things that I've learned the importance of time-management skills and selfmotivation. Although I have often stumbled upon these problems at college, they had to be approached differently in a working environment.

Industrial Training Certificate





This certificate is awarded to

KAUSHAL KUMAR

of

HERITAGE INSTITUTE OF TECHNOLOGY

for successfully completing the Industrial Training on

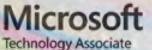
MATLAB & IT'S APPLICATIONS

from

Aug 5 to Oct 3, 2021 (40 Hours) and implementing the project titled

THREE PHASE FULL CONTROLLED BRIDGE CONVERTER

Certificate ID: TG/20211021 Issue Date: Oct 3, 2021



















Aniket Santra

from Heritage Institute of Technology has successfully completed a 4-week online training on **Internet of Things**. The training consisted of Building an IoT Monitoring System, Controlling Devices Over the Internet, Cloud, APIs and Alerts, Machine Learning with IoT, and The Final Project modules.

We wish Aniket all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA



Rohan Goswami

from Heritage Institute of Technology has successfully completed a 4-week online training on **Internet of Things**. The training consisted of Building an IoT Monitoring System, Controlling Devices Over the Internet, Cloud, APIs and Alerts, Machine Learning with IoT, and The Final Project modules.

We wish Rohan all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-09-23 Certificate no.: 65179146-2098-DD3A-F0AB-E4B2F428DACF



Upamanyu Chatterjee

from Heritage Institute of Technology has successfully completed a 4-week online training on **Internet of Things**. The training consisted of Building an IoT Monitoring System, Controlling Devices Over the Internet, Cloud, APIs and Alerts, Machine Learning with IoT, and The Final Project modules.

Upamanyu scored 91% marks in the final assessment and is a top performer in the training.

We wish Upamanyu all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA



Gaurav RAJ

from Heritage Institute of Technology has successfully completed a 4-week online training on **Internet of Things**. The training consisted of Building an IoT Monitoring System, Controlling Devices Over the Internet, Cloud, APIs and Alerts, Machine Learning with IoT, and The Final Project modules.

In the final assessment, Gaurav scored 67% marks.

We wish Gaurav all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-10-06 Certificate no.: 72F07780-F9AA-9CA8-93A8-C9D25C3387A8



INCANUS TECHNOLOGIES PRIVATE LIMITED

Registered office: Sona Towers, 3rd Floor, Hosur Rd, Industrial Area, Krishna Nagar, Bengaluru, Karnataka 560029 CIN: U72200KA2018PTC115606

To whomsoever, it may concern

11th Nov 2021

This is to certify that Mr. Souptik Poddar, has successfully completed his internship with Newton School as an **Operations Intern** for a period of 4 Months 16 days (14th Jun 2021 - 30th Oct 2021). During the period, he handled various projects and made processes to streamline the operations, and brainstormed and executed several strategies to promote growth.

During the course of the internship, Mr.. Souptik Poddar has shown a great amount of responsibility, sincerity, and a genuine willingness to learn, and a zeal to take on new assignments and challenges. In particular, his coordination skills and communication skills are par excellence and his attention to detail is impressive.

We wish him all the best in his future endeavors.

Yours sincerely,

Siddharth Maheshwari

Director, Newton School



Date: 06th Oct 2021

To Whom It May Concern

This is to certify that Mr Manab Podder student of "Heritage Institute of Technology" has done the project work on "Study of Motor Load Calculations at basement area"

In our Organization during the period from 30/08/2021 to 30/09/2021.

During Training period he was found to be hardworking, sincere and committed to his work.

We wish him every success in his future career.

Sumed Dixit

(Sumeet Dixit)

Head-HRM

TATA STEEL LIMITED

Kharagpur 721 301 India
Tel 91 3222 233317 Fax 91 3222 233353
Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001
Tel 91 22 66658282 Fax 91 22 66657724
Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com



EASTERN RAILWAY

Office of the Sr.Divisional Electrical Engineer (Traction Distribution) Eastern Railway, Sealdah Kolkata-700 014

CERTIFICATE

This is to certify that Avirup Kar B.Tech. Electrical Engineering student of Heritage Institute of Technology, 994 Madurdaha, Chowbaga Road, Anandapur, P.O.East Kolkata Township, Kolkata – 700 107 has successfully Vocational Training under Electrical (Traction Distribution) Branch of Sealdah Division, Eastern Railway from 08.09.2021 to 22.09.2021.

The performance of Avirup Kar during the training period was quite full satisfactory.

I wish him every success in his life.

(N.S.Aich)

Sr.Divisional Electrical Engineer (Traction Distribution) Eastern Railway, Sealdah



ABHAY KUMAR HIMANSHU

from Heritage Institute Of Technology KOLKATA has successfully completed a 6-week online training on **MATLAB**. The training consisted of Introduction, Foundations, Mathematics, Functions, Plotting, Programming, Case Studies, and Final Project modules.

In the final assessment, ABHAY KUMAR scored 80% marks. We wish ABHAY KUMAR all the best for future endeavours.

farest

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-10-01 Certificate no.: 6BAA9727-BA4E-28A7-654B-45AF17A47E4B



Anil Kumar

from Heritage Institute Of Technology has successfully completed a 6-week online training on **MATLAB**. The training consisted of Introduction, Foundations, Mathematics, Functions, Plotting, Programming, Case Studies, and Final Project modules.

We wish Anil all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-09-30 Certificate no.: 40B280C8-1A55-18A2-DDBF-2A626FCBAFE0



Payal Choudhary

from HERITAGE INSTITUTE OF TECHNOLOGY, KOLKATA has successfully completed a 6-week online training on **MATLAB**. The training consisted of Introduction, Foundations, Mathematics, Functions, Plotting, Programming, Case Studies, and Final Project modules.

We wish Payal all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-09-28 Certificate no.: D62B4F19-0370-71F5-1EE0-E3AAEE9AE630



RAHUL RAJ

from Heritage Institute Of Technology KOLKATA has successfully completed a 6-week online training on **MATLAB**. The training consisted of Introduction, Foundations, Mathematics, Functions, Plotting, Programming, Case Studies, and Final Project modules.

In the final assessment, RAHUL scored 72% marks. We wish RAHUL all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-10-11 Certificate no.: 95FED05E-F55A-FC3D-735E-C8A6176C22A4



Chandra Prakash

from HERITAGE INSTITUTE OF TECHNOLOGY has successfully completed a 6-week online training on **MATLAB**.

The training consisted of Introduction, Foundations, Mathematics, Functions, Plotting, Programming, Case

Studies, and Final Project modules.

We wish Chandra Prakash all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-09-28 Certificate no.: 78FA0D9F-4AFE-AF5F-D11B-CA6560131444



Saket Anand

from HERITAGE INSTITUTE OF TECHNOLOGY has successfully completed a 6-week online training on **MATLAB**.

The training consisted of Introduction, Foundations, Mathematics, Functions, Plotting, Programming, Case

Studies, and Final Project modules.

We wish Saket all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA



COURSE CERTIFICATE

Apr 28, 2020

Bhavesh Gandhi

has successfully completed

Neural Networks and Deep Learning

an online non-credit course authorized by DeepLearning.AI and offered through Coursera



John Ng

Andrew Ng, Founder, Deep Learning. AI & Co-founder, Coursera Kian Katanforoosh, Co-founder, Workera Younes Bensouda Mourri, Instructor of AI, Stanford University

Verify at coursera.org/verify/NN8VMZA36H4P

Coursera has confirmed the identity of this individual and their participation in the course.



Jyotirmoy Murmu

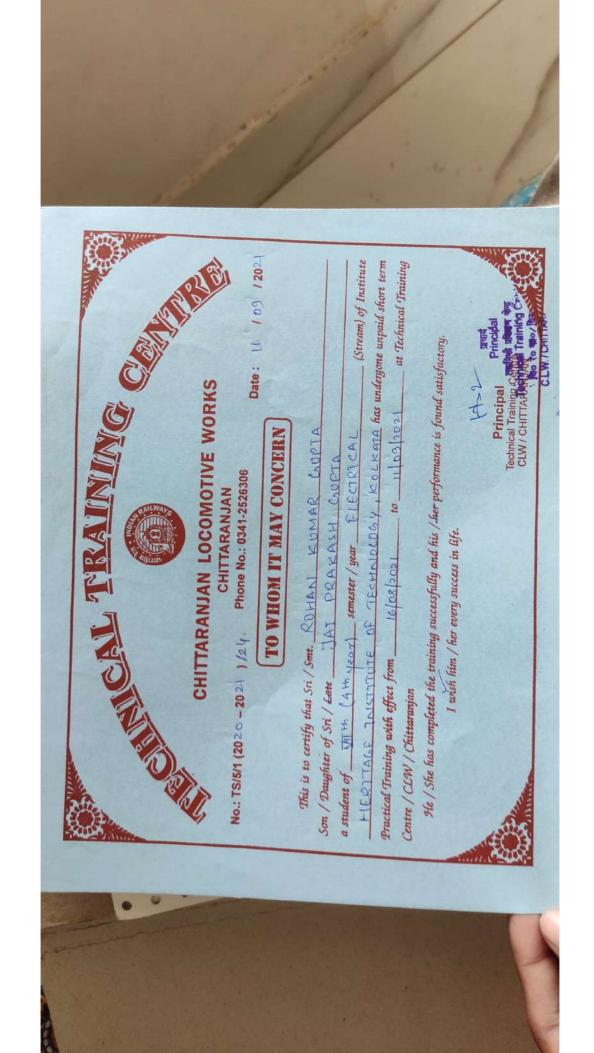
from Heritage Institute of Technology has successfully completed an 8-week online training on **PCB Design**. The training consisted of Introduction to Autodesk Eagle, Project 1 - ASTABLE 555 Timer, Warnings and Layers, Project 2 - Shift Register 74595 LED Controller, Special and Miscellaneous Topics, Case Study, and Final Project modules.

In the final assessment, Jyotirmoy scored 64% marks. We wish Jyotirmoy all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2022-02-20 Certificate no.: 9E399263-8736-39B7-A24E-DCDFBA4DDCED



Bosch Training Centre Certificate





2929

Abhinandan Mandal

from Heritage institute of technology

has attended A training programme on Vehicle System Basics and newer technologies

in Diesel & Gasoline Injection systems & Auto Electricals

From 30.08.2021 to 28.09.2021

MCKV - Bosch JCC, Howrah at

and has successfully acquired the best of theoretical and practical knowledge.

Sanjal Knuz Ghel.

No: 2021 / 13



STEEL AUTHORITY OF INDIA LIMITED
स्टील अथॉरिटी ऑफ़ इण्डिया लिमिटेड
ALLOY STEELS PLANT
एलॉय स्टील्स प्लांट
HUMAN RESOURCE DEVELOPMENT CENTRE
मानव संसाधन विकास केन्द्र
DURGAPUR - 713208
दुर्गापुर -713208

This is to certify that

Heritage Institute of Technology, Kolka	Roll Number 12618016041 student of the stream Electrical Engineering has in the discipline of Electrical Engineering the under mentioned department(s)
Department:	
SMS & CCS - Field Maint. (Electrical)	Performance Good
	Conduct Good
Total no. of days attended: 2 Weeks	

(Subhadip Chakraborty)

Sr. Manager (HRD & OD)

@ Sunt to



STEEL AUTHORITY OF INDIA LIMITED
स्टील अथॉरिटी ऑफ़ इण्डिया लिमिटेड
ALLOY STEELS PLANT
एलॉय स्टील्स प्लांट
HUMAN RESOURCE DEVELOPMENT CENTRE
मानव संसाधन विकास केन्द्र
DURGAPUR - 713208
दुर्गांपुर -713208

This is to certify that

Heritage Institute of Technology, Kolkata undergone Vocational Training in ASP in I	stream Electrical Engineering has the discipline of Electrical Engineering has not mentioned department(s)
Department: SMS & CCS - Field Maint, (Electrical)	Performance Good
	Conduct Good
Total no. of days attended: 2 Weeks	

(Subhadip Chakraborty)

Sr. Manager (HRD & OD)

Of She's





ADITYA KUMAR

from HERITAGE INSTITUTE OF TECHNOLOGY has successfully completed a 6-week online training on **PLC Programming**. The training consisted of Introduction to Automation, Fundamentals of PLC, PLC Programming, Instructions and Operations, Control Systems and Case Study, and Final Training Project modules.

In the final assessment, ADITYA scored 80% marks.

We wish ADITYA all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA



MUDASSAR SAGHIR

has successfully completed a 6-week online training on **PLC Programming**. The training consisted of Introduction to Automation, Fundamentals of PLC, PLC Programming, Instructions and Operations, Control Systems and Case Study, and Final Training Project modules.

In the final assessment, MUDASSAR scored 82% marks.

We wish MUDASSAR all the best for future endeavours.

Jarvet

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA



Shovanjyoti Biswas

from Heritage Institute of Technology has successfully completed a 6-week online training on **PLC Programming**. The training consisted of Introduction to Automation, Fundamentals of PLC, PLC Programming, Instructions and Operations, Control Systems and Case Study, and Final Training Project modules.

In the final assessment, Shovanjyoti scored 84% marks.

We wish Shovanjyoti all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-09-24 Certificate no.: FDB913E4-6CB1-701F-1644-F0D0CD7DC2BC



SUBAJIT PAUL

from Heritage Institute of Technology has successfully completed a 6-week online training on **PLC Programming**. The training consisted of Introduction to Automation, Fundamentals of PLC, PLC Programming, Instructions and Operations, Control Systems and Case Study, and Final Training Project modules.

SUBAJIT scored 96% marks in the final assessment and is a top performer in the training.

We wish SUBAJIT all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA



SUMON MONDAL

from HERITAGE INSTITUTE OF TECHNOLOGY has successfully completed a 6-week online training on **PLC Programming**. The training consisted of Introduction to Automation, Fundamentals of PLC, PLC Programming, Instructions and Operations, Control Systems and Case Study, and Final Training Project modules.

In the final assessment, SUMON scored 88% marks.

We wish SUMON all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-09-24 Certificate no.: 666A01F7-AFE4-B5F9-552C-4911E7862317



Tamoghna Chakraborty

from Heritage Institute of Technology has successfully completed a 6-week online training on **PLC Programming**. The training consisted of Introduction to Automation, Fundamentals of PLC, PLC Programming, Instructions and Operations, Control Systems and Case Study, and Final Training Project modules.

In the final assessment, Tamoghna scored 88% marks.

We wish Tamoghna all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

SKILL LYNC

CERTIFICATE OF PARTICIPATION

Shivam Kumar



for attending the workshop on

Power Electronics- Industry application

04 Jul 2021

SURYANARAYANAN P

Date:

Program Director

Certificate UID: ykhi5kgtv6



Anshu Bharti

from Heritage Institute of Technology, Kolkata has successfully completed an 8-week online training on

Programming with C and C++. The training consisted of Getting Started With Programming in C, Diving Into C

Programming, Fundamentals of Object Oriented Programming Using CPP, Diving into CPP Programming, and

Building Cricket Game Application modules.

Anshu scored 94% marks in the final assessment and is a top performer in the training.

We wish Anshu all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-10-03 Certificate no.: EB5A2B97-94F0-3FC7-041D-C62789A1F0E7



Arpan Das

from Heritage Institute of Technology has successfully completed an 8-week online training on **Programming**with C and C++. The training consisted of Getting Started With Programming in C, Diving Into C Programming,
Fundamentals of Object Oriented Programming Using CPP, Diving into CPP Programming, and Building Cricket

Game Application modules.

We wish Arpan all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA



Pallavi Gudan

from Heritage Institute of Technology has successfully completed an 8-week online training on **Programming**with C and C++. The training consisted of Getting Started With Programming in C, Diving Into C Programming,
Fundamentals of Object Oriented Programming Using CPP, Diving into CPP Programming, and Building Cricket

Game Application modules.

We wish Pallavi all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-09-30 Certificate no.: F993FC50-0F4D-6F01-F885-0E81FD84FFEA



Sudeshna Pahari

from Heritage Institute of Technology, Kolkata has successfully completed an 8-week online training on

Programming with C and C++. The training consisted of Getting Started With Programming in C, Diving Into C

Programming, Fundamentals of Object Oriented Programming Using CPP, Diving into CPP Programming, and

Building Cricket Game Application modules.

We wish Sudeshna all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA



Apurva Krishna

from Heritage Institute Of Technology, has successfully completed a 6-week online training on **Programming** with Python. The training consisted of Introduction to Python, Using Variables in Python, Basics of Programming in Python, Principles of Object-oriented Programming (OOP), Connecting to SQLite Database, Developing a GUI with PyQT, Application of Python in Various Disciplines and The Final Project modules.

We wish Apurva all the best for the future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA



Pragya Paul

from Heritage Institute of Technology has successfully completed a 6-week online training on **Programming** with **Python**. The training consisted of Introduction to Python, Using Variables in Python, Basics of Programming in Python, Principles of Object-oriented Programming (OOP), Connecting to SQLite Database, Developing a GUI with PyQT, Application of Python in Various Disciplines, and The Final Project modules.

We wish Pragya all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-09-25 Certificate no.: FC948825-5784-A485-5DB7-5308BBDCFEC6



Sabnam Kumari

from Heritage Institute Of Technology has successfully completed a 6-week online training on **Programming**with Python. The training consisted of Introduction to Python, Using Variables in Python, Basics of Programming in Python, Principles of Object-oriented Programming (OOP), Connecting to SQLite Database, Developing a GUI with PyQT, Application of Python in Various Disciplines, and The Final Project modules.

Sabnam scored 100% marks in the final assessment and is a top performer in the training.

We wish Sabnam all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA



Sabnam Kumari

from Heritage Institute Of Technology has successfully completed a 6-week online training on **Programming**with Python. The training consisted of Introduction to Python, Using Variables in Python, Basics of Programming in Python, Principles of Object-oriented Programming (OOP), Connecting to SQLite Database, Developing a GUI with PyQT, Application of Python in Various Disciplines, and The Final Project modules.

Sabnam scored 100% marks in the final assessment and is a top performer in the training.

We wish Sabnam all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA



Souptik Poddar

from Heritage Institute of Technology has successfully completed a 6-week online training on **Programming**with Python. The training consisted of Introduction to Python, Using Variables in Python, Basics of Programming in Python, Principles of Object-oriented Programming (OOP), Connecting to SQLite Database, Developing a GUI with PyQT, Application of Python in Various Disciplines, and The Final Project modules.

Souptik scored 100% marks in the final assessment and is a top performer in the training.

We wish Souptik all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA



Abhay Ranjan

from Heritage Institute Of Technology has successfully completed a 6-week online training on **Programming**with Python. The training consisted of Introduction to Python, Using Variables in Python, Basics of Programming in Python, Principles of Object-oriented Programming (OOP), Connecting to SQLite Database, Developing a GUI with PyQT, Application of Python in Various Disciplines, and The Final Project modules.

Abhay scored 100% marks in the final assessment and is a top performer in the training.

We wish Abhay all the best for future endeavours.

Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-09-30 Certificate no.: 06390FB4-E560-4757-1446-7C5C1F288C5D



Name Chaitali Gaonkar Division KW / PO

 Department
 People & Orgazation

 Telephone
 022 - 6855 3785

 Fax
 022 - 3966 3736

E-Mail <u>chaitali.gaonkar.ext@siemens.com</u>

Date 08.10.2021

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr. Rikdeb Banerjee** a bonafide student **Heritage Institute of Technology, Kolkata** has undergone internship training in **Smart Infrastructure** department at Kalwa Works from 08.09.2021 to 06.10.2021. In view of **CoVid-19** situation, this training was virtual training.

We wish him success in all future endeavors.

SIEMENS LTD.

Ganesh Pitale, Chief Manager – People & Organization