

A.K.M. Fahmidul Hasan Santo

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SUMMARY

From the very beginning of my academic career, I had a deep fascination towards the realm of research because of how one can quench their curiosity and illuminate himself of the unknown and can profoundly influence the perception and advancement of society. Also, both of my other hobbies debating and basketball motivated me in analysis and be more hardworking which will ultimately propel me in the highest peak of research sector.

EXPERTISE & SKILLS

Software	Programming Languages	Aptitude	Language
Microsoft office, AutoCad, Solidworks(Prepared and Attended a CSWP exam), Ansys WorkBench, Tecplot, EnergyPlus, Modelica, Labview	Python, C, HTML, Matlab , Arduino	Leadership, Organizing, Communication & Networking, Project Management, Public Speaking, Strategic Planning , Decision making & Problem Solving	English, Bengali, Japanese, Korean

EXPERIENCE

Bheramara 410MW CC Powerplant | Industrial Trainee Bahirchar, Bheramara, Kushita|**10/2022-11/2022**

- Our goal was to gain interim work experience in an industrial environment in order to gain Hands- on work experience and skills .
- We received on field knowledge and experience on different sectors like Mechanical Maintenance, Operation Control , Electrical department, Instrumentation & Control and Accounting & Management from various expert individuals.
- We also got to experience on how a live combined powerplant functions with its different components like Gas Booster Compressor, Turbine , generator, HRSG, Cooling Tower, Water Treatment Plant , Superheater, Reheater, Economizer etc.
- We also did 2 project on how to replace the ACW pump line and its component with CCW pump line and its component in order to supply cooling water to Gas Booster and the Thermal efficiency of HRSG on a particular time .

Inter University Debate Tournament | Organizer BUETDC, BUET, Dhaka | **3/2018**

- Conducting debates, Arranging foods, Contacting Judges
- Brought a major sponsorship which contributed financially to Inter University Debate Tournament arranged by BUETDC

Buet Debate Club| Publication Secretary

Notre Dame Debate Club| Senior Program Officer

Participation in various debate tournaments| 3rd speaker

Academic Writer

- Helped in writing, organizing Research paper, Journal Paper, Conference Paper , PhD paper

EDUCATION

Bangladesh University of Engineering & Technology

Bachelor of Science in Mechanical Engineering

Last Term CGPA : 3.21 Thesis CGPA 4.00

Dhaka, Bangladesh

2018-Present

Notre Dame College

Higher Secondary School Certificate

Group: Science GPA: 5.00

Dhaka, Bangladesh

2017

Bogra Zilla School

Secondary School Certificate

Group: Science GPA :5.00

Dhaka, Bangladesh

2017

Test Scores

TOEFL : 103

Reading: 26 Listening: 29 Speaking: 23 Writing: 25

Graduate Record Examination(GRE): 301

Quantitative: 159, Verbal 142

HONORS & AWARDS

- Winning 70% scholarship on ISCEA Supply Chain Management Case Competition
- Champion in Inter District Debate Competition by Shomokal and Division Debate Competition by ACC
- Runners up of Inter hall Basketball tournament
- Perfect Attendance Certificate in Notre Dame College
- Python for Everybody (Coursera)

PROJECTS

- 3rd eye for Blind people using Arduino (Coding + Circuit)
- Milk Chiller using Peltier Module (Assembly)
- Hand on Trash Collector : Combination of line follower robot and 6 DoF Metal Robotic arm (Coding + Circuit+ Assembly)

Thesis & Publication

Experimentation and finding the comparison of mechanical properties between parent material and welding Heat Affected Zone of Rail line in different temperature and cyclic loading (Under Review)

- Effect of temperature on Hardness and Tensile strength of Rail line steel welded HAZ: Hardness and Tensile strength decreases in rail steel with temperature raise through BHN from UTM.
- Difference in Hardness and Tensile strength of Rail line welded HAZ after multiple cyclic load in different temperature: After applying 10 million cyclic load through rail slipper dynamic tester on the rail steel on different temperature we measured the hardness and ultimate tensile strength again.
- Finding crack formation through Ultrasonic Non Destructive tester using pulse echo method: Where we learnt how to maneuver the Ultrasonic Testing Machine in order to find crack and crack length in a steel sample.
- Finding the difference in Microstructure in 6 rail steel samples found from our experiment through SEM/ Metallography: We crosschecked with various different steel microstructure in order to find the actual result. We managed to find that our samples were lamellar pearlite and the carbide size were increasing with temperature.