

PUJA RANI PAUL

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PROFILE

Objective-oriented Mechanical Engineering student seeking a challenging position to apply knowledge and skills in problem solving and designing a better future for the country. Adept at utilising cutting-edge technologies to optimise processes and enhance overall efficiency. Ability to learn fast and passion for new learnings.

EDUCATION

Bangladesh University of Engineering and Technology (BUET), Dhaka **Apr 2019 - Present**

Bachelor of Science in Mechanical Engineering

Level 4 - Term 2

CGPA - 3.87

Expected date of graduation: May, 2024

Holy Cross College, Dhaka **Jul 2016 - Jul 2018**

Higher Secondary School Certificate (2018)

GPA : 5.00 (Obtained marks : 88.5%)

Secured board scholarship in general category

Savar Girls' High School, Savar, Dhaka **Jan 2011 - Apr 2016**

Secondary School Certificate (2016)

GPA: 5.00

Secured board scholarship in talentpool category

PROJECTS

Spiral Plate Cross Flow Heat Exchanger - a prototype for automobile radiator **Mar 2023**

With a team, I have designed and manufactured a spiral plate heat exchanger from scratch. The heat exchanger had a compact design with lower pumping requirements, larger contact surface area hence higher efficiency and lower fouling.

Med_Pro : A Medicine Delivery Drone **Oct 2022**

I have designed and manufactured a complete drone for the purpose of delivering medicines at the doorstep of customer. The drone has real-time video and GPS transmission system

RESEARCH AND THESIS

Experimental and Numerical Analysis of Effective Heat and Sound Insulation Properties of Locally Available Jute Stick Board (Ongoing)

I have been working on this thesis with my fellow partner under the supervision of Dr. Anup Saha, Assistant Professor, BUET. This was originally supervised by my former thesis supervisor late Dr. Md. Quamrul Islam who had served as a professor both in BUET and MIST.

Softwares utilized: Ansys, MS Excel

Effect of Heating Rate on Microstructure and Mechanical Behavior of Al/Mg alloy: A Molecular Dynamics Study (Ongoing)

Under the supervision of Dr. Mohammad Nasim Hasan, Professor, BUET.

Softwares utilized: LAMMPS, MATLAB, Tecplot, MATHTAB, AtomsK, MS Excel.

Thermal Management of Outer Shell of Coaxial Cylinder Containing a Constant Flux Heat Source Using P, PI and PID Controllers (Ongoing)

Under the supervision of Dr. Sumon Saha, Professor, BUET.

Softwares utilized: COMSOL, Simulink, MATHTAB.

INDUSTRIAL ATTACHMENT

British American Tobacco Bangladesh (BATB), Dhaka

I was attached to the Engineering Sites and Services (ESS) department for 21 days. There, I have worked with the HVAC system, Boilers, ETP, STP and Power distribution systems in both factories in Dhaka and Savar.

Titas Gas Field, Brahmanbaria

A day-long visit as a part of the academic course "Petroleum Engineering".

Dockyard and Engineering Works (DEW), Narayanganj

A day-long tour of the industry.

ACHIEVEMENTS

- Obtained the RISE Student Research Grant for the research proposal titled "Experimental and Numerical Analysis of Effective Heat and Sound Insulation Properties of Locally Available Jute Stick Board" worth of BDT 55,830 from Research and Innovation Centre for Science and Engineering (RISE), BUET.
- Secured my position in the dean's list throughout 3 levels in the department of MEchanical Engineering, BUET.
- Ranked 16 in the National Science Olympiad 2016.
- Participated in University Physics Competition 2022 and certified as accomplished competitor

SKILLS AND CERTIFICATION

- **MATLAB:** : Certified by Mathworks. Completed 4.5 credit courses with A+ offered by department of Mechanical Engineering, BUET.
- **LAMMPS:** Expertise in writing LAMMPS code and simulating sintering phenomena using **OVITO**.
- **Programming Language:** Experienced in writing codes using C and Python.
- **CAD software:** Proficient in using AutoCAD and SolidWorks for designing and Modelling.
- **Adobe Illustrator:** Experienced in using Adobe Illustrator for designing purpose.
- **MS softwares:** Comfortable and experienced in using MS Excel, MS Powerpoint and MS Word.
- **Soft Skills:** Attended the "Soft Skill Development Program" arranged by Directorate of Continuing Education (DCE), BUET which developed communication and presentation skill in my personality.

ACTIVITIES

- Logistics Executive at BUET Automobile Club (2020 – present)
- Technical executive at ImechE BUET (2021- present)
- Association representative of the Mechanical Engineering Association, BUET

REFERENCES

Dr. Mohammad Nasim Hasan

Professor, Department of Mechanical Engineering, BUET

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Dr. Anup saha

Assistant Professor, Department of Mechanical Engineering, BUET

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