



Amit Kumar

Roll No.: 224103303

M.Tech - Fluid and Thermal Engineering

Mechanical Engineering

Indian Institute of Technology Guwahati

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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
M.Tech.	Indian Institute of Technology, Guwahati	7.33 (Current)	2022-Present
B.Tech.	National Institute of Technology, Patna	7.83	2014-2018
Senior Secondary (12th)	State Board (BSEB)	77.80%	2013
Secondary (10th)	State Board (BSEB)	71%	2011

EXPERIENCE

- Havells India Ltd.** 18th June 2018 - 09th Aug. 2019
Engineer, Process Quality and Design Neemrana, Rajasthan
 - I was involved in activities like Quality improvement, Customer Enquiry, Quality Circle, Design and Development.
 - Cost of poor quality (COPQ), Process rejection reduced from 7 percent to 5 percent in Pump assembly line.
 - Implemented real time quality data monitoring and data storage analysis in Pump machine shop.
 - Implemented Poka-Yoke for all multi spindle nut runner in assembly line.
 - Successfully guided and lead Quality Circle team in Motor plant, Neemrana, Rajasthan.
- Autonext** 23rd May 2016 - 05th June 2016
Student Intern Jamshedpur, Jharkhand
 - Internship on Automobile Basics and Advanced System.

PROJECTS

- Study of Micro-channel Heat Sink for uniform cooling of miniature systems** MTP ongoing
Mentor - Prof. Manmohan Pandey (Department of Mechanical Engineering) iitg.ac.in
 - Numerical Investigation of Effect of Porous Microfins in Thermal and Fluid Flow Behavior in Miniature Channels.
 - Thermal and Hydraulic analysis of Micro-channel heat sink with porous structure and Jet impingement.
 - Design and Simulation of different structure using Ansys software.
- Design and Development of Semi-Automated Tilkut (sweet) Making Machine** 2017 - 2018
Mentor - Dr. Anand Bhushan (Associate professor at NITP) nitp.ac.in
 - Sponsored by Design Innovation Centre, NIT Patna.
 - A prototype of the machine was made, and after that, fabrication was done.
 - Design of Tilkut making machine was done using CAD software Solid Works.
- Solving the partial differential equation for Couette Flow using finite difference method** Aug-Nov 2022
<https://github.com/Amit22410/CFD-Project1.git>
 - Developed C code for solving non-dimensional partial differential equation for Couette Flow.
 - Developed C code for different methods FTCS, BTCS, and Crank Nicolson.
- Lid-Driven Square Cavity Problem** Aug-Nov 2022
<https://github.com/Amit22410/CFD-Project.git>
 - Developed C code for 2D Navier-Stokes equation for lid-driven cavity problem using the finite volume method and SIMPLE algorithm.

TECHNICAL SKILLS

- Software:** Ansys Fluent, AutoCAD, Solidworks
- Programming:** C/C++, Python*
- Miscellaneous:** MS Word, MS Power Point, MS Excel, MS Visio, Tecplot *Elementary Proficiency

KEY COURSES TAKEN

- Advanced Thermodynamics
- Fluid Mechanics
- Advanced Engineering Mathematics
- Two Phase Flow and Heat Transfer
- Computational Fluid Dynamics
- Engineering Computing Lab
- Conduction and Radiation
- Aircraft Propulsion

POSITION OF RESPONSIBILITY

- **Mentor:** Guided and lead Quality Circle team at Havells India Ltd. in 2019.
- **Senior Member:** Intramural'16, Sports fest of NIT Patna

ACHIEVEMENTS

- **GATE 2022**, Secured All India Rank 257 in the National level Examination. *2022*
- **Inter NIT Volleyball**, Participated in INTER NIT tournament held in year 2017 at NITK SURATHKAL. *2017*
- **Gold Medal**, Winner of Volleyball tournament at BIT PATNA. *2016*
- **Gold Medal**, Won gold medal in Volleyball, Inramual'16' sports fest of NIT Patna. *2016*
- **Bronze Medal**, Won bronze medal in Football, Itramural'16' sports fest of NIT Patna. *2016*

EXTRACURRICULAR ACTIVITIES

- **Teaching Assistant**, duty for the subject of Mechanical CNC Workshop. *Aug 2023 - Present*
 - **Teaching Assistant**, duty for the subject of Engineering Mechanics. *March 2023 - July 2023*
 - **Participant**, Webinar on How to Design a Battery for EVs' using Solidwork, Ansys, MATLAB. *2023*
 - **Certificates and Courses**, Completed a Udemmy course on Ansys Tutorial. *2023*
 - **Vocational Training**, Completed four Weeks vocational training at NTPC Kahalgaon, Bihar. *June 2017*
 - **Participant**, Participated in Workshop of Vehicle Overhauling of Automobile, NIT Patna. *2016*
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