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 Developement.
  – Cost of poor quality (COPQ), Process rejection reduced from 7 percent to 5 percent in Pump assembly line.
  – Implemented real time quality data monitering 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, Rajsthan.

- **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.

- **Engineering Computing Lab Projects** *Aug-Nov 2022*
  https://github.com/Amit22410/Engineering-computing-lab-projects.git
  – Developed C code of Gauss elimination method to solve a system of linear equations.
  – Developed C codes for solving single order and system of single order initial value problems by Runge Kutta method of fourth order.
  – Developed C codes for solving higher order initial value problems by Runge Kutta method of fourth order.
  – Developed C codes for solving Newton Raphson problems.

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

- Computational Fluid Dynamics
- Conduction and Radiation
- Aircraft Propulsion

Position of Responsibility

- **Senior Member**: Intramural'l6, Sports fest of NIT Patna

Achievements

- **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

- **Participant**, Webinar on How to Design a Battery for EVs' using Solidwork, Ansys, MATLAB.   *2023*
- **Certificates and Courses**, Completed a Udemy course on Ansys Tutorial.   *2023*
- **Participant**, Participated in Workshop of Vehicle Overhauling of Automobile, NIT Patna.   *2016*