Uday Paul George

Mechanical engineering undergrad

Kochi,Kerala   LinkedIn   GitHub   udaypaulgeorge@gmail.com   123me0013@iiitk.ac.in

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PROFILE

Highly motivated mechanical engineering student with a strong commitment to advancing expertise in mechanical systems, thermal sciences, additive manufacturing, and vibration dynamics. Actively engaged in interdisciplinary projects and technical teams to deepen practical and theoretical knowledge, leveraging skills across CAD design, simulation, programming, and embedded systems.

EDUCATION

Btech undergrad in Mechanical Engineering with specialization in design and manufacturing
Indian Institute of indo Egypt   **2023 – 2027**
Relevant Coursework: Thermal Sciences, Mechatronics, CAD Design, Fluid Mechanics, Dynamics, Controls

High school
Bhavan's Vidya Mandir, Eroor, Thripunithra   **2008 – 2022**
Graduation :Summa Cum Laude

SKILLS

Programming: Python, C, C++, MATLAB, LaTeX, HTML, CSS, three.js, Basics of ROS
Software: ANSYS Fluent, NX, SolidWorks, Catia, Fusion 360, Simulink, KiCad
Technical: CAD Modeling, CFD Simulation, Embedded Systems, IoT, Microcontrollers, Computer Vision, Game Development
Soft Skills: Teamwork, Leadership, Problem Solving, Communication

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PROJECTS

Thermal Analysis of Heat Exchanger using ANSYS Fluent
Simulated fluid flow and thermal characteristics of a heat exchanger, achieving optimized heat transfer efficiency through model refinement.

Additive Manufacturing - 3D CAD Modelling
Designed complex mechanical components using SolidWorks and Fusion 360, focusing on manufacturability and material efficiency for 3D printing.

IoT-based Embedded System for Environmental Monitoring
Developed a microcontroller-based sensor system to collect and transmit real-time environmental data, integrating MATLAB and Simulink for data analysis.

Computer Vision Application for Industrial Inspection
Built a basic image processing tool using Python and OpenCV to automate defect detection in manufacturing pipelines.

Low-Cost Go-Kart Design and Manufacturing (currently in progress)
Led the end-to-end design and development of an affordable go-kart, optimizing costs through careful material selection and manufacturability analysis. Validated physical prototypes against CAD models using SolidWorks and NX, ensuring accuracy and reliability in both fabrication and performance. Emphasized accessibility and efficient resource utilization, resulting in a highly economical engineering solution.

CERTIFICATIONS

- **MATLAB Courses**
  Course 1
  Course 2
  Course 3
  Course 4

- **Embedded Systems Fundamentals**
  Certificate

- **NPTEL**
  Basic of finite element analysis - I

EXTRACURRICULAR ACTIVITIES

- Founding Member and Core Team, SAE Collegiate Club
- Core Team Member, Mechanical Engineering Association (MEA)
- Volunteer, IIITK Solasta Technical Festival
- Participant, Inter-IIIT Football Tournament
- Avid Quizzer with multiple accolades
- School All-Rounder Certificate and Proficiency Awards

LANGUAGES

Malayalam: C2
English: C1 Proficiency
Hindi: B2 Proficiency
Tamil: A2 Proficiency
Telugu: A1 Proficiency

REFERENCES

Available upon request.