

SRIHARI M

Mechatronics Engineering | Software | Applied Data Science

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PROFESSIONAL SUMMARY

Mechatronics Engineering undergraduate (also pursuing a B.S. in Data Science at IIT Madras) with hands-on experience across embedded systems, control simulation, and IoT prototyping. Built and debugged a multi-platform CubeSat attitude-control simulator and an ESP32-based health-monitoring device through a national entrepreneurship bootcamp. Seeking opportunities to apply hardware-software integration skills to real engineering problems.

EDUCATION

Sri Manakula Vinayagar Engineering College (SMVEC), Puducherry 2025 – Present

B.Tech – Mechatronics Engineering

Indian Institute of Technology Madras (IIT Madras) 2025 – Present

BS – Data Science and Applications

KV No. 1 JIPMER Campus, Puducherry 2012 – 2024

Computer Science - 12th Grade

TECHNICAL SKILLS

Programming: Python, C, C++, Java, JavaScript, SQL (MySQL), HTML, React

Simulation & Design Tools: MATLAB/Simulink, SolidWorks, Autocad 2D, Arduino IDE, Plant Simulation

Other: Git, GitHub, VS Code, Adobe Photoshop/Canva

PROJECTS

CubeSat Attitude Determination & Control Simulator Python, MATLAB

- Built a simulator that predicts and corrects how a small satellite (CubeSat) tumbles and stabilizes itself in space, modeling its rotation and using a control algorithm to steer it back to a target orientation.
- Found and fixed a bug where the satellite was correcting itself in the wrong direction, traced to a sign error in the rotational math — a debugging process that deepened my understanding of the underlying physics.

HealthRescuers – Portable IoT Health Monitor ESP32, Arduino

- Developed a low-cost, portable device to track heart rate, SpO₂, temperature, breathing rate, and CO exposure for elderly and chronic-care patients.
- Built as part of the Wadhvani Foundation's IDE Ignite entrepreneurship bootcamp, taking the concept from problem identification through working prototype.

Finance Tracker Python, Tkinter, HTML

- Implemented hashed-password authentication with a 3-attempt login lockout and daily/weekly/monthly expense history.
- Built a desktop personal finance tracker with user authentication, expense tracking,

PROFESSIONAL DEVELOPMENT & PRESENTATIONS

IDE Ignite Bootcamp – Idea to Plan Apr 2026

Ministry of Education & Wadhvani Foundation, hosted at SMVEC — 5-day entrepreneurship program (21–25 April)

Presenter, IEEE ICETEA 2026 2026

Presented "Child-Centric Facial Emotion Detection: A Comparative Analysis of CNN and ResNet Architectures" at the IEEE International Conference on Emerging Technologies in Engineering Applications, technically co-sponsored by IEEE Madras Section

LEADERSHIP & COMMUNITY

- Student Ambassador — IA Student at SMVEC
- Associate Vice President, Public Relations — SMVEC Toastmasters Club
- Member — Maths Club, SMVEC