SARAH THOMAS

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SUMMARY

Third-year Electronics and Computer Engineering student actively building skills in embedded systems and product development. Learning software technologies like MySQL, MongoDB, React, and Node.js with a focus on hardware-software integration through IoT and ML projects. Gaining experience in both frontend and backend development. Currently developing a church directory web app using React, Node.js, Express, and MySQL. Seeking internship opportunities in embedded systems, full-stack development, or software-hardware integrated roles.

EDUCATION

B.Tech., Electronics and Computer Engineering — Graduating Expected May 2027
Amrita Vishwa Vidyapeetham, Bengaluru, Karnataka — Current GPA: 8.63

Senior Secondary (Class 12), ICSE – PCM and Computer Science — Graduating 2023
Christ Academy ICSE School, Bengaluru, Karnataka — Score: 89.5%

Secondary Education (Class 10), ICSE — Graduating 2021
Christ Academy ICSE School, Bengaluru, Karnataka — Score: 97.4%

TECHNICAL SKILLS

Programming Languages: C, Java, Python, SQL,Javascript
Web Development: HTML, CSS, JavaScript, React, Node.js
Embedded Systems: Arduino, ESP32, LPC2138, Proteus Simulation, Keil uVision
Certifications: AI Fundamentals – Microsoft Azure (2024), Fundamentals of Data Science – IIT Madras (2024), AI Fundamentals – IBM SkillsBuild (2024)

ACADEMIC PROJECTS

CFS Severity Prediction using XGBoost and GCN — 2025
Developed ML models to predict Chronic Fatigue Syndrome severity using patient-symptom relationships.

- Used XGBoost for structured data and Graph Convolutional Networks (GCN) for graph-based symptom modeling.
- Focused on feature selection, class imbalance, and interpretability for accurate severity classification.

Gesture-Based Home Automation using LPC2138 — 2025
Designed a gesture-controlled home automation system using LPC2138 and ML-based gesture recognition.

- Trained a model on 16 ASL gestures for controlling light, fan, and door based on serial input.
- Interfaced DC motor, LED, and servo motor with LPC2138 in Proteus and Keil uVision.

PacketWatch – Real-time Network Packet Monitoring Tool — 2025
Developed a Flask + SocketIO based web application to capture

- Used TCRF5000 optical sensor for RPM input and calculated HP using HP = Power / RPM.
- Designed a program to compare initial and final horsepower values via performance graphs.

Church Directory Full-Stack Web Application — 2025 – Present
Developing a CRUD-enabled web application for church member management.

- Built using React (frontend), Node.js and Express (backend), and Tailwind CSS for styling.
- Used MySQL to store member profiles, event data, and manage updates with admin controls.

ACTIVITIES

Team Lead – MISC CODES (Microsoft Ignite Student Club) — 2024 – Present
Led a student coding team organizing technical sessions and community events

- Initiated and led an event called **CodeForge**, aimed at promoting a strong coding culture on campus.

Executive Member – ECCF Club, Amrita Vishwa Vidyapeetham — 2024 – Present
Core member of the Electronics Communication and Computing Forum (ECCF)

- Helped organize seminars, workshops, and tech talks on IoT, ML, and embedded systems.
- Coordinated student outreach and managed event logistics for technical sessions.