

Sanjay JR

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WORK EXPERIENCE

InSemi

April. 2024 – June 2025

Embedded Systems Intern

- Developed I2C Drivers for the sensor and integrated them into the Raspberry Pi
- Built a custom OS with Yocto by adding custom device drivers

Angstromers

June. 2024 – March 2025

Software Intern

Bangalore, IN

- Achieved 90% accuracy in image classification by implementing an SVM-based deep learning algorithm, improving upon the previous 81% accuracy of CNN.
- Trained and validated the model using large datasets to enhance class detection.
- Conducted technical training sessions, educating over **200 students** on Git and Programming languages.

Freelance, Upwork

Dec. 2023 – May. 2024

Full Stack Developer

Remote

- Built a podcast summarization platform that converts audio to text and generates summaries using LLMs, benefiting **500+ users**.
- Designed UI/UX and developed a website for a multi-speaker transcription app to convert multi-speaker conversations into speech with unique voices for each speaker.

PROJECTS

SmartNest Home Assistant

https://github.com/thesanju/LLM_home_Assistant

- Developed an **NLP-powered home assistant** on Raspberry Pi, enabling seamless voice-command interactions and smart device control.
- Integrated state-of-the-art **LLMs and TTS** for natural language understanding and speech synthesis.
- Enhanced with vision-based customizations for improved contextual awareness and personalized automation.

Auto Attendance

<https://github.com/thesanju/Auto-Attendance>

- Engineered an automated attendance system using Haar Cascade-based face recognition on **Raspberry Pi**.
- Streamlined attendance logging by integrating spreadsheet management and **cloud synchronization**.
- Validated with data from **100+ subjects**, achieving **sub-2 second** processing latency.

Podcast Summarizer

<https://github.com/thesanju/podcast-summarize->

- Developed a podcast summarization platform using **advanced STT and LLMs** for concise summaries; built a responsive **ReactJS** UI and a scalable **Python backend** with **RESTful APIs** and **async processing**.
- Successfully delivered the solution to a client, significantly boosting podcast engagement and user experience.

EDUCATION

Cambridge Institute of Technology

May 2025

Bachelor of Electronics and Communication Engineering

Bangalore, IN

- **CGPA:** 7.16

CERTIFICATIONS, SKILLS & INTERESTS

- **Languages:** Python, JavaScript, TypeScript, C, C#, SQL

- **Frameworks:** ReactJS, ExpressJS, NodeJS, Flask, UI/UX
- **Tools:** Linux, Raspberry Pi, AWS, VPS, CI/CD, Figma
- **Certifications:** MERN Full Stack development (100x devs), Introduction to JavaScript (Pupil First)