# Shantanu Ramanujapuram shantanuramanujapuram@gmail.com | <https://www.github.com/shanTen> | [shantanu.ramanujapuram.com](https://shantanu.ramanujapuram.com)

# Experience

**Embedded Systems Intern | Indira Gandhi Center of Atomic Research | Hybrid Feb 2024 – Mar 2025**

* Architected a **low-bandwidth data transmission network layer** **using GSM/GPRS** over 4G, **reducing bandwidth usage by 98%** while ensuring **higher reliability** in remote locations.
* Engineered and wrote comprehensive **full-stack** data management solution using **Express.js**, **React**, **Next.js**, and **React Native**, with **MySQL** database integration
* Implemented **OTA** (Over the Air) update system for remote firmware changes.

**Software Development Engineering Intern | Baton Systems Ltd | Onsite June 2024 – July 2024**

* Gained expertise in **test-driven development** (TDD) and high-level architectural design of web services using **Java** and **Spring Boot**
* Integrated the **node registration** process for the **Core Forex** settlements team's **notarization service** into the admin dashboard using **React.js.**
* Implemented comprehensive **unit testing** across multiple microservices using **JUnit5**

**DevOps and Web Engineering Lead | IITM Paradox | Hybrid Mar 2024 – June 2025**

* Led the design, development, and deployment of **mobile applications** for **Paradox 2024 and 2025**.
* Oversaw the **release of 5 event management** apps to the Play Store as **Deputy Core – WebOps** for Paradox 2025.
* Managed the **CI/CD pipeline** for the Central Portal Application on **AWS** using **GitHub Actions**, ensuring seamless updates and deployments.
* Supported end-to-end fest management for an event with **more than 8,000 participants**.

# Projects

**Sentinel Smart Wearable |** *MicroPython, NodeJS, React Native, Embedded-C* **January 2024**

* Developed and built an **IoT smart wearable** voice assist device for visually impaired individuals
* Performed Image frame analysis using **MobileNet** and **Edge Impulse**, achieving a **97.5% reduction** in object detection response time from **2000ms** to **50ms**.

**Multi-Terrain Hexapod Robot |** *C++, NodeJS, Python, Electron* **September 2024**

* Designed and built **robot telemetry system** utilizing **LoRa WAN**, **TCP**, and **UDP** communication protocols to enable **robust data transmission** and remote connectivity
* Developed a comprehensive control system including an **Electron application** and a full-featured **REST API** to facilitate seamless **system integration** and **robotic control**
* **Top 20 Finalist** in India at AICTE ARM Inventors Challenge 2024; **Winner** - Robotics Category at **SaRaM 2025**.

# Technical Skills

**Languages:** JavaScript, TypeScript, Python, C#, Java, C, C++

**Web Development:** React.js, React Native, Express.js, Flask, Spring Boot, REST APIs

**Databases:** MySQL, MongoDB, PostgreSQL, Microsoft SQL Server

**Scripting/DevOps:** Bash, Batch, PowerShell, Git, Docker, GitHub Actions

# Education

**SRM IST Ramapuram | Chennai, Tamilnadu | CGPA: 9.48 August 2022 – Present**

* B.Tech - Electronics and Communications Engineering

**The PSBB Millennium School | Chennai, Tamilnadu June 2007 – June 2022**

* Computer Science and Mathematics | **10th - 465/500 | 12th - 449/500**

**IIT Madras BS Degree | Remote June 2022 – June 2025**

* Diploma in Data Science | January 2024 – June 2025