

Shantanu Ramanujapuram

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Student with experience in full-stack development, mobile app creation, REST APIs, database management, and a strong background in automation, test driven development and embedded systems

Experience

- Paid Project Intern | Indira Gandhi Center of Atomic Research | Hybrid** **Feb 2024 – July 2024**
- Designed and fabricated a prototype of an IoT Smart Energy Meter from scratch
 - Created data transmission network layer (**ExpressJS**) from GSM/GPRS to WAN (internet + REST API web services)
 - Recorded data in a **MySQL** database and built interfaces for web in **React** and mobile in **React Native**
- Software Development Engineering Intern | Baton Systems Ltd | Onsite** **June 2024 – July 2024**
- Streamlined node registration for the notarization service in Core Forex settlements team
 - Added comprehensive unit tests using **JUNIT5** for multiple microservices
 - Introduced to test-driven development and high-level design of webservices in **Java** and **Spring Boot**.

Projects

- Sentinel Smart Wearable | Micro-Python, NodeJS, React Native, Embedded-C** **January 2024**
- Engineered IoT smart wearable capable of assisting visually impaired people
 - Integrated ESP32 Camera, TF Luna Mini **LiDAR** and **haptic motors** in a R-pi Pico microcontroller
 - Performed **AI frame analysis** for content using mobile net model and edge impulse, **response time - 200ms**.
 - Won **2nd Place** at **SRM Project Expo**, **1st place** at **BIT, Bengaluru Project Expo**
- Paradox Mobile Clients | React Native, TypeScript, Expo** **April 2024**
- Super Coordinator – Web Operations, IIT Madras BS Degree's Cultural Fest Paradox 2024.**
 - Developed **two android applications** for Paradox 2024, used to track **event registration** and **accommodation**
 - Used by volunteers to track the footfall of **2000+ students**, with extremely fast application response times
- Multi-Terrain Hexapod Robot | C++, NodeJS, Python, Electron** **September 2024**
- Designed** robot telemetry systems which use **LoRa WAN**, **TCP** and **UDP** communication streams
 - Built an Electron application** to act as the robot's controller to give movement instructions to the robot
 - Integrated LiDAR**, IR Camera, on board sensors and networking into **ST-Discovery-L475E-IOT01A** Firmware.
 - Top 20 finalist - AICTE ARM Inventors Challenge 2024**

Technical Skills

WebDev: React Web, React Native, MongoDB, REST APIs in Express, Flask, Springboot
Electronics: Micropython, Arduino, embedded driver development (STM32), Mbed OS
Programming: JavaScript, Python, C#, Java, Typescript, C/C++
DevEnv: Bash scripting, git, MS-batch, PowerShell Automation, MySQL, Digital Ocean
Others: ffmpeg, ImageMagick, OpenCV, mediapipe, LTSpice, Pandas, Scikit, Altium

Education

- IIT Madras BS Degree | Remote | CGPA: 7.2** **June 2022 – Present**
- Foundational course in Data Science | June 2022 – December 2023
 - Diploma in Data Science | January 2024 – Present
 - Courses: Machine Learning Theory, ML Fundamentals, Business Data Management
- SRM IST Ramapuram | Chennai, Tamilnadu | CGPA: 9.46** **August 2022 – Present**
- Electronics and Communications Engineering
 - Achievements: SRM Project Day 2024 - Runner Up, Winner BIT Project Expo (April 2024)
- The PSBB Millennium School Gerugambakkam | Chennai, Tamilnadu** **June 2007 – June 2022**
- Computer Science and Mathematics Stream | **AISSE: 465/500 | AISSCE: 449/500**