Shantanu Ramanujapuram

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Web developer experienced in building **full-stack** applications having proficiency in creating **mobile applications, REST APIs, Database Management and testing.** With a strong background in **automation**, **embedded systems**, **python** and **node.js**.

Projects | Experience

Hydrocarbonator + CC parser + Tree Parser | *Python*
- Created **three programming/markup languages** from scratch in Python
- Implemented schemas for IUPAC nomenclature and custom markup
- Demonstrated PoC for the expansion of typical lexers and parsers to support scientific nomenclature

Sentinel Smart Wearable 2024 | *Micro-Python, NodeJS, React Native, Embedded-C*
- Engineered IoT device 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*
- **Super Coordinator - WebOps, Paradox 2024.**
- Developed **two android applications** for **IIT Madras**'s Paradox 2024 used to track **event registration** and **accommodation**
- Used by volunteers to track footfall of **2000+ students**, with extremely fast application response times

Paid Project Intern | Indira Gandhi Center of Atomic Research | Feb 2024 – July 2024 | Hybrid
- Designed and fabricated a prototype of an IoT Smart Energy Meter from scratch
- Created data transmission network layer from GSM/GPRS to WAN (internet + REST API web services)
- Built with non-invasive instrumentation on top of raspberry Pi (Pico)
- Stack used: MySQL, ExpressJS, React

SDE Intern | Baton Systems Ltd | June 2024 – July 2024 | Onsite
- Worked in Core Forex settlements team
- Streamlined node registration in for the notarization service
- Added comprehensive unit tests in JUNIT5 for multiple microservices
- Stack used: Java, Spring Boot, React, JUNIT5

WebDev: React Web, React Native, MongoDB, REST APIs in Express, Flask, Springboot

Electronics: Micropython, Arduino, embedded driver (STM32)

Programming: JavaScript, Python, C#, Java, Typescript, C

DevEnv: Shell scripts, git, MS-batch, and PowerShell Automation, MySQL, atlas-mongodb, apache

Others: ffmpeg, ImageMagick, OpenCV, mediapipe, LTSpice, Pandas, Scikit, Altium

Education

- **SRM Institute of Science and Technology Ramapuram** | **Chennai, Tamilnadu**

  Electronics and Communications Engineering | 2022-Present | Current CGPA: 9.46
  Achievements: SRM Project Day 2024 - Runner Up, Winner BIT Project Expo (April 2024), Paid intern at IGCAR, Chennai, Interned at M/s Baton Systems, dealing with financial and currency exchange products.

- **IIT Madras BS Degree** | **Remote**

  Foundation course in Data Science | 2022-2023
  Diploma in Data Science | 2022–Present | Current CGPA: 7.2 |
  Courses Taken: Machine Learning Theory, ML Fundamentals, Big Data Management

- **The PSBB Millennium School Gerugambakkam** | **Chennai, Tamilnadu**

  Computer Science and Mathematics Stream | 2007-2022 | AISSE: 465/500 | AISSCE: 449/500
  Achievements: Quiz Club Secretary | Debate Club Vice President (2020-2021) & President (2021-2022)