

# Shantanu Ramanujapuram

shantanuramanujapuram@gmail.com |  <https://www.github.com/shanTen>

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

## 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**
- SDE 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 **Springboot**.

## Projects

- Hydrocarbonator + CC parser + Tree Parser | Python** **May 2023**
- Created **2 interpreted languages** and **1 markup language** respectively, from scratch in Python
  - Implemented schemas for IUPAC nomenclature and custom naming support
  - Demonstrated PoC for the expansion of typical lexers and parsers to support scientific nomenclature
- 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 **2<sup>nd</sup> Place** at **SRM Project Expo**, **1<sup>st</sup> place** at **BIT, Bengaluru Project Expo**
- Paradox Mobile Clients | React Native, TypeScript, Expo** **April 2024**
- Super Coordinator - WebOps**, **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 footfall of **2000+ students**, with extremely fast application response times

## Technical Skills

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

**Electronics:** Micropython, Arduino, embedded driver development (STM32)

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

**DevEnv:** Bash scripting, git, MS-batch, and PowerShell Automation, MySQL, atlas-mongodb, apache

**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, Big 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**
  - Achievements: Quiz Club Secretary | Debate Club Vice President & President