HARSHA KEERTHAN MUTHU KRISHNAN

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EXPERIENCE

MediaTek *Full Stack Developer Intern*   *May 2023 - Dec 2023*

- Web development: Redesigned intranet websites and integrated SSL encryption using the MERN stack and CMS, enhancing user interface and security for over 50 chip designers, thereby improving workflow efficiency by 30%.
- DevOps: Established a local version control system and automated CI/CD pipeline, reducing deployment time by 75% and significantly enhancing team collaboration.
- Scripting: Developed Python-based system to utilize RESTful APIs, automating content synchronization across Drupal websites, ensuring zero redundancy and improving data update efficiency.
- Tech Stack: Python, SQL, PHP, Drupal, React, Express & NodeJS, RESTful & JSON API, Agile practices

Continental Automotive *Software Engineer Intern*   *May 2022 - Aug 2022*

- Engineered communication between firmware and sensors by implementing UART interface to reduced failure rates to near zero using Python.
- Demonstrated to Continental's Business Unit, leading to successful production deployment and market launch.
- Used 3D motion technology to capture machine learning data and stored it in mongoDB using mqtt for real-time analysis.
- Tech Stack: Python, C++, MQTT, CMake, ECal

PROJECTS

TransitSafety Dashboard

- Analyzed bus driver datasets to compute safety scores using Python, improving data accuracy by 20%.
- Visualized data analytics using Plotly and Dash frameworks, through interactive dashboard.
- Tech Stack: Python, Pandas, Dash, Plotly, Pytest, Jupyter Notebook, Jira, Render

Book Store Management

- Developed an Admin portal for managing book records with full CRUD functionality, utilizing REST APIs to retrieve and display book details.
- Tech Stack: Java, Spring Boot, HTML, CSS, Thymeleaf Templates, Tomcat

FlightLogger

- Developed a flight log management system with NextAuth for OAuth, implementing role-based access control, and leveraging Next.js server actions for efficient data handling.
- Tech Stack: Next.js 14, React, MongoDB, NextAuth.js, Tailwind CSS, Shadcn UI, TypeScript, Resend, Vercel

SITAtlas — Final Year Project

- Engineered a web-based geospatial navigation system using Mapbox GL JS to address wayfinding challenges in SIT's new Punggol campus, integrating point of interest (POI) data with GeoJSON for efficient spatial data management.
- Integrated an AI-powered chatbot utilizing OpenAI's GPT-4o model, contextualizing responses with real time geospatial data for intelligent user interactions.
- Designed and implemented a robust CI/CD pipeline with GitHub Actions, automating Docker image builds, security scans, and deployments to DigitalOcean infrastructure while leveraging Next.js, React, and PayloadCMS for a full-stack solution.
- Nominated by professor for conference paper publication in the IEEE International Smart Cities Conference.
- Tech Stack: NextJS, NodeJS, MongoDB, Mapbox, PayloadCMS, GraphQL, NGINX, Docker, DigitalOcean

EDUCATION

Singapore Institute of Technology   *Sept 2021 - Sept 2024*
B.Eng with Honours in Computer Engineering
Specialisation in Intelligent Transportation Systems (Telematics)
GPA: 4.57 — First Class Honours

SKILLS

Python, C++, JavaScript, HTML, CSS, Tailwind CSS, PHP, MySQL, React, Node.js, CMS, NextJS, MongoDB, Docker, NGINX

CERTIFICATIONS

Google Specializations	Data Analytics, IT Automation with Python, IT Support Professional ↗
Cloud	Google Qwiklab Badge: Create and Manage Cloud Resources (GCP & Kubernetes)