KARTHIK ADHARSH | Mobile No.: 91697349 | Email: karthikadharsh21@gmail.com

EDUCATION

Nanyang Technological University, Singapore — Aug 2022 - Present
Bachelor of Computer Engineering, GPA: 4.66/5 Dean's List 2023/2024
Selected Courseworks: Intro to Data Structures&Algorithms , Object oriented programming,Algorithm Design & Analysis, Microprocessor System&Design, Digital System Design.

OVERVIEW

Detail-oriented, organised and meticulous employee. Enthusiastic ready to contribute to company success. Interested in Full-Stack Development , Software Engineering, Machine Learning and AI.

WORK EXPERIENCE

HTX — Jan 2025 - Jun 2025
AI Computer Vision Engineer Intern

- Performed Object Detection and Instance Segmentation deploying various YOLO models from YOLO5 to YOLO11.
- Applied SAHI (Slicing Aided Hyper Inference) on 2,000+ images and trained 5 different models across 100+ epochs each to enhance object detection performance.
- Co-developed a live traffic monitoring dashboard for HTX, integrating real-time video streams and WebSocket-based data feeds to display live detection results from an AI model running on video input.
- Boosted detection accuracy from 60% → 95% operating Roboflow-powered data augmentation (Mosaic, Cutout, etc.) on 2,000+ images

TVS Motor — May 2024 - Aug 2024
Software Engineer Intern

- Revamped department's internal Inventory management dashboard utilising React and Node Js , improving data accuracy and cutting down manual entry time by 40%
- Constructed algorithms such as DBSCAN for drone management system to increase speed of parts movement between warehouses by 10%.

PROJECTS

StudyZen (Chrome extension) — Sep 2025 - Nov 2025
Creator

- Developed StudyZen, an AI-powered Chrome extension for NTU students integrating timetable parsing, to-do list automation, and mood-based study playlist recommendations, restructuring academic productivity for over 200 students.
- Engineered with React, TypeScript, and Supabase, featuring real-time state management, user authentication, and seamless API integration for intelligent task organisation
- Integrated Gemini Pro OCR API to accurately extract data from timetable PDFs and auto-convert into structured digital schedules with over 95% parsing accuracy.

MyDex (Web3 application) — Sep 2025 - Nov 2025
Creator

- Created "MY_DEX", a full-stack Decentralised Exchange (DEX) enabling limit and market order trading, built with React, Ethers.js, Solidity, and Hardhat

Expense Tracker for students — Jul 2024 - Jul 2024
Individual

- Created a functional Expense Tracker web application leveraging ReactJS and Firebase, aimed at helping students.
- Achieved an average load time of under 2 seconds by utilising Firebase's efficient data handling

SKILLS

- Full stack Development (MERN stack)
- Python, JavaScript, JAVA , C++

ACCOMPLISHMENTS

- Finalists , 2024 DSTA Code_Exp BrainHack Hackathon (among 300 teams)
- Developed a full-stack mobile application using React Native and Firebase, enabling public to purchase near-expiry food products at a reduced price
- Handled User Authentication and NoSQL Firebase fire-store Cloud Database functionality with a capability of handling 10000 writes/s and a 15% cut down on Response Time,making App 20% faster compared to SQL databases.