Tharun Nagaveera Marthandan

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Education

M.E. Electrical & Computer Engineering | University of Ottawa - 09/2022 → Present
Currently Enrolled in the courses:

- Software Engineering Project Management
- Data science
- Cloud Infrastructure

B.E. Electronics and Communications Engineering | Government College of Technology, Coimbatore - 08/2017 → 04/2021 - 86.9%

- Built projects like Learning Management System, Moon rover, Self-driving car with traffic sign classification, Automatic Floor Sanitizer Robot.
- Courses - Big data, Data structures and Algorithms, OOP, C Programming

Experience

Junior Research Engineer | Buddi AI - 06/2021 → 07/2022

- Worked on creating an end-to-end data lake storage system for the automation of medical data processing
- Developed data extraction tools to index and search, sample and filter data from large datasets through elastic search and apache spark
- Responsible for development and deployment of several API services to facilitate data extraction, classification and manipulation

Python Developer Intern - 12/2020 → 02/2021

- Created full-stack prototype web applications like Social media, Digital News, Student Dashboard, Online banking, Image Editor.

Freelance

- Created a web scrapper GUI with that scrapes customized eBay orders and organizes them in a spreadsheet.
- Created invoice generator GUI with template that can edit, save and compute.

Projects

Caterpillar Inc's Robotic Competition
Landed 2nd prize in Caterpillar's competition which involves scoring points by collecting minerals and performing automated tasks. The robot has automatic and manual movements. I contributed to image processing and navigation planning.

Self-driving car with traffic sign classification
Our team won 3rd prize in inter-college competition, which involved a toy car with a mounted camera made to detect traffic signs, and the car takes corresponding actions to the signs - speed up/down, left/right turn, stop sign, red and green lights, no overtaking, no horn, stop if there are obstacles, blow horn and overtake if possible.

Automatic Floor Sanitizer Robot
Worked on "Automatic Floor Sanitizer Robot", a robot that can automatically scan the perimeter and navigate to perform dry and wet cleaning.

Learning Management System
An LMS system where staff create questionnaires and grade students and students answer, visualize and compare with past results. Deployed it dockerized in AWS.

Skills

Languages
Scala, Python, Java, PostgreSQL, Bash, Assembly, Matlab

Technologies
Django, React, Spark, JSP, Docker, AWS, FastApi, Scala Play, Elastic Search

Python
Data Science, Data Visualization, Machine Learning, IoT, GUI, Web-scraping

Electronics
Raspberrypi, Arduino, ESP8266, BeagleBone, 8086, 8051

Behavioral
Communication, strategist, Teamplayer, critical thinking

Accomplishments

- Created attendance management script for my class which reduced around 15 minutes of attendance time per class
- Third prize in Inter-college project symposium for self-driving car with traffic sign classifier
- 27th Rank in Robert Bosch's National AI hackathon
- Won 2nd Prize on Topic presentation, 'Artificial Intelligence in Prosthetics' at Ramakrishna College - inter-college Symposium.
- Second prize in Caterpillar Inc's annual Robotic Competition
- Coursera Certifications - Database Management, Python, IoT(2 courses)
- Second prize in 4th Board player in Chess competition conducted across 33 colleges

Hobbies

- Chess (Chess.com 1500 - Unofficial)
- Touch Typing (95 WPM)
- Reading Fiction and non-fiction
- Guitar, Violin, Keyboard (Basic)
- Juggling 3 balls
- Amateur astronomy
- Skating