Krishan Vinod Nair

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Summary

Dedicated and versatile professional with a fervor for coding and a proactive approach to continuous learning. Demonstrated commitment to embracing new challenges and adding value to forward-thinking organizations that prioritize innovation and expansion. Eager to further enhance proficiency and understanding within the realm of technology. As a meticulous and enthusiastic individual, I am seeking a position in Software Engineering, leveraging my skills and knowledge to excel in demanding roles.

Education

2024 IIT Palakkad - BTech in Electrical Engineering (CGPA: 8.19/10)

Experience

Turing June 2024-Current

Delivery Data Scientist

- Execute advanced Supervised Fine-Tuning (SFT) processes to enhance the performance and accuracy of language models by 15-20%.
- Initiated the implementation of new evaluation frameworks for AI model performance, which streamlined testing phases and reduced development time by 20%, allowing for quicker deployment of updates and features.
- Deliver comprehensive, data-driven reports to clients, highlighting key insights and actionable recommendations to optimize model performance.

Hewlett Packard Enterprise (HPE) June 2023-August 2023

SDE Intern

- Designed and developed a Python package for Anomaly Detection.
- Utilizes supervised learning with neural networks using CNN and RNN models, reducing the training time by 66%.
- Detects anomalies for Anomaly detection achieving 97% accuracy in multivariate time series.

Marine Electricals (India) Ltd June 2022-July 2022

R&D Intern

- Development of a Data Acquisition Module.
- Designed a circuit to measure the voltages of six sources(three-phase supply, 2 sources).
- Measure the current in the lines and convert them to RMS values.
- Using UART communication protocol for transmitting data, facilitating the integration of 10 distinct peripherals.

Technical Skills

Programming Languages : C++, Python, C, HTML, SQL, React, Javascript.
Developer Tools and Frameworks : VS Code, Git, Anaconda, Tensorflow, Pytorch, Flask.
Others : Competitive Programming, Supervised Machine Learning, Reinforcement Learning

Projects

Control of a Mobile Robot using Reinforcement Learning Link

- Understanding different Reinforcement Learning algorithms for control of a mobile robot including DDPG and TD3
- Simulating and using both for training on Turtlebot3 in Gazebo using Python reducing training time by upto 30%

Secure Password Manager with AES-256 Encryption and SQLite Database Link

- Implemented AES-256 + PBKDF2, making brute-force 10x harder than DES and 256^{16} times more secure than AES IV reuse.
- Optimized password storage with SQLite,reducing lookup times by 20-35% over file-based storage.
- Developed a FLTK GUI that uses 50% less memory than Qt/GTK, ensuring smooth performance.

Smart Taxi Using OpenAI Gym Link

- Made a Smart Taxi using Q-Learning in Python
- Navigates around a 2D grid with barriers
- Picks up and drops off the passenger at the correct location achieving 100% task completion
- Does the action in the least number of moves.

Develop Pulse Rate Estimation from PPG Signal Using Average Magnitude Difference Function Link

- Proposing a non-invasive method for estimating pulse rate
- Developed a Python code using the Average Magnitude Difference Function(AMDF).
- Applied to PPG signals achieving 93% precision.

Extra Curricular Activities

- Github
- Organizer for Robowars, Petrichor 2023 (Techno-Cultural Fest of IIT Palakkad)