KEERTHI RAJ

Github | LinkedIn | keerthirajkv2@gmail.com | https://keerthiraj.netlify.app/

PROFILE

A tech enthusiast and an upcoming IT professional specializing on Python, C, Java, C++, and React.js. Expertise in hybrid automotive algorithm, real time detection on Raspberry pi. Beyond my profession, I actively contribute to the tech community through insightful blogs, contribute to a culture of knowledge-sharing and innovation.

SKILLS

- **Programming Languages:** Python; C; Java; C++
- **Front-End Development:** HTML; CSS; React.js
- **Back-End Development:** Flask; Node.js
- **Databases:** MySQL; SQLite; MongoDB
- **Technologies & Operating Systems:** Linux; Raspberry Pi; OpenCV; Microsoft Office; TensorFlow; Natural Language Processing; Machine Learning; Neural Networks
- **Software & Cloud:** Microsoft Azure; Google Firebase; Heroku; Github; Anaconda; Visual Studio Code; Android Studio; JetBrains; MATLAB; Kaggle

EDUCATION

Masters In Computer Engineering - The University of Texas At Arlington, Texas, USA (GPA – 4.0/4.0) **08/2022 – 05/2024**

Bachelors In Computer Engineering And Data Science - Presidency University, India (GPA – 3.96/4.0) **08/2019 – 06/2023**

PROJECTS – [Github - https://github.com/KR-16]

Language Model Detection - Language Detection Blog - https://github.com/KR-16/NAIVE-BAYES-CLASSIFIER

- Increase in diversity of textual data, requires differentiation between human and machine generated content.
- Developed custom Language Model (LLM) prompt to create a specialized text dataset crucial for training and integrated with the diverse kaggle datasets for training.
- A project focused on detecting language models through comprehensive feature extraction and analysis.
- Implemented a robust language model detection system, contributing to advancements in content verification.
- Evaluated model performance using accuracy metrics, Bayes theorem, ensuring high reliability in language model identification.

Flowers Classification - Flower Classification Blog - https://github.com/KR-16/FlowersClassification

- Developed and implemented a petal flowers classification model using Tensor Processing Units (TPUs).
- Optimized neural network architecture for efficient model training and inference.
- Performed feature engineering and data preprocessing to improve the accuracy of the model.
- Integrated TPUs to boost overall model efficiency by greatly increasing processing rates.

React Messaging Application - https://github.com/KR-16/React-Message-Application

- Developed a feature-rich real-time messaging application using React.js.
- Implemented robust authentication and authorization mechanisms to protect user data.
- Performed manual code reliability testing and comprehensive unit testing using the React Testing Library.

EXPERIENCE

Student Associate – University of Texas at Arlington, Arlington, Texas **03/2023 – Present**

- **Skills Acquired:** Communication, Organization, Teamwork, Customer Service, Multi-tasking
- Responding to emails from potential students in a timely and professional manner, answering their questions and concerns.
- Processing applications for admission with careful consideration, making sure they are accurate and comprehensive.
- Managing the admissions procedure, assisting students through the necessary pre-requisites and steps.
- Collaborating with team members to streamline processes and improve overall efficiency in admissions operations.

Software Engineer - REEV (Range Extended Electric Vehicle), SAEINDIA **03/2021 – 08/2022**

- **Skills Acquired:** MATLAB – Simulink
- Designed a hybrid automotive algorithm for the microcontroller unit, with a focus on sensor control and automatic hybrid conversion.
- Collaborated with a multidisciplinary team to integrate algorithms into the vehicle's control system.
- Conducted thorough testing and optimization of algorithms to ensure seamless functionality in real-world scenarios.

Machine Learning Engineer - ROBOCCON 2022, VIKASANA **02/2022 – 07/2022**

- **Skills Acquired:** Raspberry pi, TensorFlow Lite, OpenCV, Data Collection and Transformation
- Implemented ball detection on Raspberry Pi, showcasing skills in computer vision and edge computing.
- To improve the diversity of the dataset, captured the multiple instances of the ball under various image conditions.
- Applied deep learning algorithms to optimize for accuracy and performance, such as CNN and TensorFlow Lite.
- CSRT, KCF, and Boosting—three OpenCV tracking algorithms—were used to get over hardware constraints and improve Raspberry Pi tracking performance.