**KEERTHI RAJ**

[Github](https://github.com/KR-16)| [LinkedIn](https://www.linkedin.com/in/keerthirajvasireddyyuvaraj/)| [keerthirajkv2@gmail.com](mailto: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://medium.com/@keerthirajkv2/unmasking-the-writers-a-dive-into-detecting-language-models-vs-8f910963bbf5) - <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://medium.com/@keerthirajkv2/petal-flowers-classification-with-using-tpu-c73f31943d09) - <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.