**KEERTHI RAJ**

<https://github.com/KR-16>| <https://www.linkedin.com/in/keerthirajkr/>| [keerthirajkv2@gmail.com](mailto:keerthirajkv2@gmail.com) | <https://keerthiraj.netlify.app/>

**PROFILE \_**

Machine Learning Engineer specializing in Natural Language Processing (NLP), adept at designing and implementing innovative solutions. Proficient in TensorFlow, Keras, and various ML frameworks, with a strong focus on creating intuitive data visualizations. Have a knowledge in Java development. Strong problem-solving skills and delivering accurate and reliable AI solutions.

**SKILLS \_**

* **Frameworks:** Machine Learning; Numpy; Computer Vision; Pandas; Scikit-learn; Data Visualization; Regression; Classification; Clustering; TensorFlow; Keras; Docker; Natural Language Processing; Neural Networks; Big Data, AI, Generative AI; Linux; Raspberry Pi; OpenCV; Microsoft Office; Power BI
* **Programming Languages:** Python; C; Java; C++; SQL
* **Front-End Development:** HTML; CSS; React.js
* **Back-End Development:** Flask; Node.js
* **Databases:** MySQL; SQLite; MongoDB; Hadoop;
* **Software:** Microsoft Azure; Google Firebase; Heroku; Github; Anaconda; Visual Studio Code; Android Studio; JetBrains; Matlab; Kaggle; Google Cloud Platform

**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>] **\_**

**Visual Question Answering -**  Python, Natural Language Processing, BERT, Transformers, Computer Vision, Feature Engineering

* Trained the model on a dataset comprising approximately 400,000 image-question-answer triplets to ensure robustness.
* Implemented model checkpointing to save intermediate states during training, facilitating retraining and experimentation.
* Achieved competitive performance on benchmark VQA datasets, demonstrating the effectiveness of the LSTM-VGG19 architecture.

**Car Price Prediction –** Python, Flask, Feature Engineering, Regression Algorithm, Predictive Modelling, Heroku, Machine Learning

* Developed a Regression based machine learning model to predict car prices based on features such as mileage, brand, and model.
* Utilized regression algorithms and feature engineering techniques to achieve accurate predictions.
* Deployed to Heroku with the help of Flask Framework.

**Language Model Detection –** Natural Language Processing, feature engineering, predictive modelling, Python, Naïve Bias

* Developed a robust language model detection system utilizing feature extraction techniques and statistical analysis methods.
* Addressed the challenge of increased diversity in textual data, distinguishing between human and machine-generated content through innovative approaches.
* Evaluated model performance rigorously, employing a combination of accuracy metrics and Bayesian inference to ensure high reliability in language model identification.

**Flowers Classification –** Image Processing, feature engineering, predictive modelling, Python, Tensorflow, Hardware acceleration

* Developed a petal classification model using Tensor Processing Units (TPUs), expertise in machine learning, hardware acceleration.
* Optimized neural network architecture for efficient model training and inference, demonstrating proficiency in deep learning.
* Conducted feature engineering and data preprocessing to enhance model accuracy, utilizing advanced data manipulation methods.
* Integrated TPUs to boost overall model efficiency by greatly increasing processing rates, leveraging parallel computing capabilities.

**EXPERIENCE \_**

**Slate Intern – University of Texas at Arlington,** Arlington, Texas **03/2023 – Present**

* **Skills Acquired:** Manage, Communication, Organization, Teamwork, Customer Service, Multi-tasking
* Managed a team of 7 members, scheduling tasks and conducting weekly updates.
* Collaborated with team members to optimize admissions processes, enhancing efficiency.
* Processed admissions applications with meticulous attention to detail.
* Guided students through admissions procedures, ensuring a seamless experience.

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

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

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

* + - **Skills Acquired:** Raspberry pi, TensorFlow, Computer Vision, Data Collection, Python, Transformation
    - Implemented ball image recognition on Raspberry Pi, showcasing skills in computer vision and edge computing.
    - Improved dataset diversity by capturing multiple instances of the ball under various image conditions.
    - Optimized deep learning algorithms such as CNN and TensorFlow Lite for accuracy and model performance.
    - Utilized CSRT, KCF, and Boosting OpenCV tracking algorithms to enhance Raspberry Pi tracking performance.