Vijay Rakkaiah

Data Scientist

Contact

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GitHub:
https://github.com/VijayRakkaiah

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https://www.linkedin.com/in/vijay-rakkaiah/

Portfolio:
https://vijayrakkaiah.github.io/Portfolio/

Expertise

- Python
- Machine Learning
- NLP
- Power BI
- Data Visualization
- Deep Learning
- LLM
- AWS Cloud

Education

2013 - 2017
Bachelor of Engineering
Mechanical Engineering

RVS Educational Trust group of Institution – Dindigul
Anna University

Certification

- **Advanced Professional Certification in Data Science - GUVI**
- **Python Programming Certification – GUVI**

Achievement

- **Solved 250+ Python problems on GUVI CodeKata**
- **Daily practice of coding and ML problem-solving**

Automotive Design and Development Engineer with hands-on experience in Data Science, Machine Learning, Deep Learning, and automation. Certified in Data Science and Python (GUVI), with strong skills in Python, MySQL, ML model development, and data analytics, and experience working with cross-functional teams on data-driven solutions.

Technical Skills

- **Programming & Libraries:** Python, Pandas, NumPy, Scikit-learn, PyTorch
- **Machine Learning:** Regression, Classification, Clustering, Feature Engineering, Model Evaluation
- **Deep Learning:** CNNs, Transfer Learning (ResNet50)
- **NLP:** TF-IDF, Text Preprocessing, Logistic Regression
- **Databases:** MySQL
- **Data Visualization:** Matplotlib, Seaborn, Plotly, Power BI
- **Tools & Platforms:** Jupyter Notebook, Google Colab, Streamlit, Git, GitHub

Projects

Brain Tumor MRI Image Classification (Deep Learning)

- Developed a 4-class brain tumor classification model using CNN and Transfer Learning (ResNet50) in PyTorch.
- Trained on 3,000+ labeled MRI images with data augmentation, improving model generalization and robustness.
- Achieved ~92% validation accuracy with balanced class-wise performance, evaluated using confusion matrix and accuracy metrics.
- Automated preprocessing, training, and evaluation pipeline to ensure reproducibility and faster experimentation.
- Tools: Python, PyTorch, CNN, ResNet50, OpenCV

Fake Job Posting Detection (NLP & Machine Learning)

- Built an NLP-based classification model to detect fraudulent job postings using TF-IDF vectorization and Logistic Regression.
- Processed and analyzed 17,000+ job descriptions with text cleaning, tokenization, and feature extraction.
- Achieved ~95% classification accuracy and strong precision-recall balance, reducing false positives in fraud detection.
- Designed an end-to-end ML pipeline from raw text preprocessing to model evaluation.
- Tools: Python, NLP, TF-IDF, Scikit-learn

Experience

Feb 2023 - Present
Hinduja Tech Limited, Chennai
Senior Engineer

- Developed machine learning models for prediction, optimization, and early decision-making in vehicle development programs.
- Built ML models (Regression, XGBoost, LSTM) to predict EV battery health (RUL), fuel efficiency, and driving range.
- Integrated ML insights into engineering workflows to support proactive design improvements and performance optimization.
- Collaborated with design, manufacturing, and quality teams to improve automotive product performance using data-driven analysis.

Dec 2020 - Sep 2022
Expleo Technologies India Private Limited, Chennai
Engineer

- Developed an automation solution that generated and dynamically updated end-to-end project timelines based on the initial project start date.

Aug 2019 - Dec2020
Vengala Engineering Design Service Pvt. Ltd., Bangalore
Design Engineer

- Worked on the design and development of automotive lighting plastic components.