Harsh Malashetti

9019856807 harshmalashetti@gmail.com Harsh Malashetti

Education

M S Ramaiah University of Technology **Sep. 2020 – May 2024**
Bachelor of Engineering in Electronics and Communication *CGPA: 9.02/10*

Projects

Predictive Analytics for Customer Churn | *Python, Scikit-learn, Logistic regression, Pandas* **January 2025**

- Processed and analyzed 7,000+ customer records, identifying key churn drivers to optimize retention strategies.
- Engineered and selected 10+ high-impact features (tenure, contract type, payment method), improving model interpretability and predictive power.
- Developed and optimized a machine learning pipeline using Decision Tree and Logistic Regression, achieving 85% accuracy and reducing false positives by 20% through hyperparameter tuning.
- Implemented and automated data preprocessing (missing value handling, encoding, scaling), reducing model training time by 30%.
- Designed and visualized key insights with Matplotlib and Seaborn, driving data-driven decision-making for stakeholders.

Deep Learning for Image Classification | *Python, TensorFlow, Keras, CNN* **December 2024**

- Developed and fine-tuned a 4-layer Convolutional Neural Network (CNN) on 70,000+ images, achieving 98.7% test accuracy while minimizing overfitting.
- Optimized training efficiency by integrating Batch Normalization, Dropout (0.5), and MaxPooling, reducing training time by 35% and improving convergence.
- Enhanced model robustness with real-time preprocessing (scaling, adaptive contrast, rotation augmentation), increasing accuracy on unseen data.
- Accelerated inference by quantizing weights and deploying TensorFlow Lite, reducing model size by 40% while maintaining performance.

Fall Detection of Parkinson's Patients using Motion Camera | *Python, OpenCV, CNN* **May 2024**

- Designed and deployed an AI-driven real-time fall detection system, achieving 96.8% accuracy by combining computer vision and deep learning.
- Integrated Mediapipe-based pose estimation with a CNN classifier, improving fall detection precision and reducing false positives by 30%.
- Engineered a Raspberry Pi-powered motion camera system, enabling 24/7 real-time monitoring with 25% reduced latency for instant fall recognition.
- Optimized inference pipeline using TensorFlow Lite, cutting processing time by 40%, ensuring sub-second response times for real-time applications.
- Implemented an automated emergency alert system via Telegram Bot, delivering fall alerts to caregivers within 1.2 seconds, enhancing patient safety.

Experience

EffiGo Global **January 2024 – December 2024**
Product Engineer *Bengaluru, Karnataka*

- Revamped legacy systems, migrating databases to Spring Boot and PostgreSQL, improving data retrieval speed by 45% and cutting downtime by 30%.
- Optimized database queries and indexing, reducing API response time by 30%, enhancing application performance under high traffic.
- Automated data validation and regression testing using Selenium and Java, decreasing manual testing efforts by 40% while boosting data accuracy.
- Designed and deployed a CI/CD pipeline with GitHub Actions and Docker, reducing deployment time by 55% and minimizing building failures.

Technical Skills

Languages: Python (Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch), SQL (PostgreSQL, MySQL)
ML and DS: Supervised & Unsupervised Learning (Regression, Classification, Clustering), Deep Learning (ANN, CNN), Generative AI, Natural Language Processing (NLP)
Data Visualization and Analytics:: Power BI, Tableau, Matplotlib, Seaborn
Technologies: Jupyter Notebook, VS Code, Microsoft Azure, Git, GitHub, OpenCV