Kruthik JP

Artificial Intelligence and Machine Learning Engineer

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Profile

Proactive and passionate Artificial Intelligence and Machine Learning Engineer with a B.E. degree and a proven track record of building diverse, real-world AI/ML projects. Recognized for strong problem-solving ability, creative thinking, and deep understanding of modern AI frameworks. Developed and deployed multiple deep learning systems in computer vision, NLP, and IoT domains using TensorFlow, PyTorch, and Hugging Face Transformers. Gained extensive knowledge through continuous learning and hands-on experimentation. Confident in delivering innovative solutions and eager to contribute my expertise to a forward-thinking company where I can grow, collaborate, and make meaningful impact.

Technical Skills

- Python, C, NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, OpenCV, Flask
- TensorFlow, Keras, PyTorch, Hugging Face, Transformers, CNN, RNN, LSTM, BiLSTM, Attention, BERT, GPT, ViT, TrOCR, CTC
- Classical ML: Linear/Logistic Regression, SVM, Decision Trees, Random Forest, XGBoost, LightGBM, KNN, Clustering
- Data Science: EDA, Feature Engineering, Statistics, Probability, Data Cleaning, Data Visualization, Model Evaluation
- Tools: Jupyter, Google Colab, VS Code, GitHub, Git, Anaconda, MLflow
- Domains & Deployment: NLP, OCR, CV, IoT-ML, Generative AI, Transfer Learning, Fine-tuning, Prompt Engineering, Windows

Education

B.E. in Artificial Intelligence and Machine Learning **2022–2025**
Mysore University School of Engineering, Mysore
CGPA: **8.5 / 10**

Diploma in Electronics and Communication **2019–2022**
Vidya Vardhaka Polytechnic, Mysore
Percentage: **76.44%**

SSLC (10th Grade) **2018–2019**
Kuvempu Brindavana High School, Mysore
Percentage: **70.56%**

Projects

Handwritten Character Recognition System **2025**
Built IAM dataset-based OCR using CNN+BiLSTM+CTC. Integrated TrOCR (ViT + Transformer), BERT, and beam decoding. Evaluated using CER, WER, JIWER.

DDoS Attack Detection using ML **2024**
Applied Random Forest, SVM, Decision Trees, and Neural Networks on CICIDS2017 dataset. Used Sklearn for scaling, imputation, and model evaluation (accuracy, F1, recall).

Diabetes Risk Prediction Model **2023**
Developed using Logistic Regression and LightGBM on UCI dataset. Included data cleaning, feature scaling, ROC curve analysis, and confusion matrix. Achieved 82% accuracy.

IoT-Based Water Quality Monitoring **2022**
Designed an Arduino-based system with pH, turbidity, and temperature sensors. Integrated GSM alerts and a ThingSpeak cloud dashboard for real-time monitoring and visualization.

Internships & Experience

IoT Intern, Kaynes Technology India Ltd., Mysore **2024**
Built IoT systems using embedded sensors and microcontrollers; implemented Python-based data collection and processing for industrial use cases.

Signalling & Telecom Intern, Indian Railways (South Western), Mysore **2023**
Gained hands-on exposure to railway signalling, telecom protocols, SCADA monitoring, and safety control logic with relay systems.

Certifications & Languages

Certifications: IoT Fundamentals; Python with OOPS; ML & AI; Data Science Event Participant
Languages: English (Fluent); Kannada, Telugu, Tamil, Hindi (Conversational)