Bilal Rukundi

Data Science Internship

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Summary

AI and Machine Learning student with hands-on experience in data analysis, NLP, and building ML models from scratch. Skilled in Python, NumPy, and SQL with projects ranging from chatbot development to image classification. Passionate about applying machine learning techniques to solve real-world problems and advancing toward a career in AI-driven software engineering.

Experience

Bharatiya Antariksh Hackathon 2025
AI Chatbot Engineer

Developed an AI-powered chatbot to simplify access to ISRO's geospatial satellite data by enabling natural language queries in English and Hindi. Designed the system to retrieve information from a knowledge graph built on static and dynamic web portal content, reducing the need for users to navigate complex technical portals. The solution empowers students, researchers, and government officials by making satellite datasets more discoverable, user-friendly, and accessible without prior expertise in geospatial tools.

DY Patil Machine Learning Hackathon
Developer
Pune

Performed Exploratory Data Analysis (EDA) on real-world datasets as part of my first applied machine learning project. Cleaned and preprocessed raw data, identified patterns, handled missing values, and visualized trends using Python libraries (Pandas, Matplotlib, Seaborn). Gained hands-on experience in deriving insights from data and setting the foundation for model building.

MIT 24-Hour Hackathon – Scheduled participation,

Scheduled participation in an intensive 24-hour hackathon at MIT, focused on solving real-world challenges through innovative applications of AI, machine learning. Aiming to collaborate with peers, enhance rapid prototyping skills, and deliver impactful solutions under time constraints.

Education

Rajarambabu Institute of Technology
Artificial Intelligence and Machine Learning
Diploma
September 2024 - Present

Achieved **86.5% (GPA: 9.12)** with strong focus on machine learning, data science, and programming foundations.

Projects

Machine Learning From Scratch (In Progress)

Currently developing machine learning algorithms from first principles using only Python, NumPy, and math libraries. Working on implementing linear regression, logistic regression, decision trees, and k-nearest neighbors by coding the underlying mathematics directly. The project aims to build a deeper understanding of gradient descent, loss functions, and model optimization beyond pre-built libraries.

https://github.com/Wayn-Git/MLFromScratch

Cat vs Dog Image Classifier

Developed an image classification system using transfer learning with ResNet50, achieving high accuracy in distinguishing cats from dogs. Integrated the model into a Streamlit-based UI, enabling smooth interaction for non-technical users. Focused on usability, error handling, and clean design to make the tool practical and accessible.

https://github.com/Wayn-Git/CatvsDog

FraudDetection

Built a fraud detection model on financial transaction data, addressing extreme class imbalance with feature engineering and SMOTE. Implemented a Random Forest classifier and evaluated with AUC-ROC, AUC-PR, and F1-score, uncovering fraud patterns in cash-outs, transfers, and high-value transactions.

https://github.com/Wayn-Git/Heart-Failure-Prediction

Skills

Languages

Python, JavaScript, Java, C, SQL, HTML, CSS

Libraries & Frameworks

NumPy, pandas, scikit-learn, Tensorflow, Pytorch(Novice), Matplotlib, Seaborn, ydata-profiling, TensorFlow, React js, Tailwind, Gradio, Streamlit

Tools & Platforms:

VS Code, Git/GitHub, Google Colab, Jupyter Notebook, MySQL, Botpress

Certifications

Introduction to Artificial Intelligence
Coursera

•Covers foundational AI concepts such as search algorithms, machine learning basics, and intelligent systems. Built understanding for project-based applications in ML

Prompt Engineering Fundamentals
Simplilearn

Self-taught fundamentals of communicating effectively with large language models (LLMs). Practiced creating efficient prompts for coding, content generation, and debugging

Machine Learning
Coursera

Learned core ML concepts including supervised learning, model evaluation, and data preprocessing. Built basic models using Python and scikit-learn through hands-on exercises.