Dev Saini

AI/ML Engineer

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Professional Summary

• AI/ML Engineer specializing in end-to-end machine learning pipelines using Python, TensorFlow, and Scikit-learn with experience in model deployment via Flask and Streamlit
• Proven track record of developing production-ready models achieving 85%+ accuracy on 60,000+ datasets with expertise in cross-validation, hyperparameter optimization, and feature engineering
• Strong foundation in MLOps practices including Git version control, model evaluation metrics (ROC-AUC, Confusion Matrix), and REST API development
• Competition winner (1st place Innovation Day 2024, Finalist IIT Jodhpur) demonstrating problem-solving and deployment capabilities in real-world AI applications

Education

Amity University Rajasthan — Jaipur, Rajasthan, India
Bachelor of Technology in Computer Science and Engineering — *August 2023 – Present*

- CGPA: 7.76/10.0
- **Relevant Coursework**: Machine Learning, Deep Learning, Data Structures & Algorithms, Database Management Systems, Python Programming, Artificial Intelligence, Computer Vision, Natural Language Processing, Statistical Methods

Experience

Machine Learning Engineer Intern — June 2024 – July 2024
Edunet Foundation (AICTE Initiative) — *Pan India*

- Developed end-to-end ML pipelines using Python, TensorFlow, and Scikit-learn, implementing cross-validation and GridSearchCV for hyperparameter optimization
- Performed Exploratory Data Analysis (EDA) and feature selection on 10,000+ records, reducing processing time by 25% through optimized data pipelines with NumPy and Pandas
- Evaluated models using ROC-AUC scores, confusion matrices, and precision-recall metrics, achieving 88% prediction accuracy on test datasets
- Collaborated with 20+ team members on classification projects, improving model accuracy by 12% through feature engineering and train-test split optimization
- Documented ML workflows and created data visualization dashboards using Matplotlib for stakeholder communication

Technical Skills

Programming Languages: Python, C++, SQL, PHP
Machine Learning & Deep Learning: Supervised Learning, Unsupervised Learning, Neural Networks (ANN, CNN), XGBoost, Random Forest, Logistic Regression, Decision Trees
ML Frameworks & Libraries: TensorFlow, Keras, PyTorch, Scikit-learn, NumPy, Pandas, Matplotlib, Seaborn, Plotly
MLOps & Deployment: Flask, Streamlit, REST API, Git Version Control, Model Deployment, API Development
Data Science Techniques: Exploratory Data Analysis (EDA), Feature Engineering, Feature Selection, Data Preprocessing, Data Cleaning, Data Pipelines, Statistical Analysis
Model Evaluation: Cross-Validation, GridSearchCV, RandomizedSearchCV, Hyperparameter Optimization, ROC-AUC, Confusion Matrix, Train-Test Split, Precision-Recall
Databases: MySQL, MongoDB, Database Management, SQL Queries
AI Domains: Natural Language Processing (NLP), Computer Vision (Basic), Transformers (Basic), HuggingFace (Familiar)

Projects

Cosmic Classifier - Multi-Class Planet Classification

Python, TensorFlow, Scikit-learn, Streamlit, Flask | GitHub

- Built end-to-end ML solution for IIT Roorkee Cognizance 2025, classifying 10 planet types with 85%+ accuracy using 60,000 samples
- Performed comprehensive EDA and feature selection on 10 environmental features, implementing RandomizedSearchCV for hyperparameter optimization across 4 algorithms (XGBoost, Random Forest, Decision Tree, Logistic Regression)
- Deployed production-ready REST API using Flask and interactive web interface with Streamlit for real-time classification with Plotly visualizations
- Evaluated models using ROC-AUC scores and confusion matrices, achieving F1-score of 0.83 with Git version control throughout development

Customer Churn Prediction Using Neural Networks

Python, TensorFlow, Keras, Pandas, Flask | GitHub

- Designed and deployed deep learning model using Artificial Neural Networks (ANN) achieving 89% accuracy on 15,000+ customer records
- Conducted exploratory data analysis (EDA) and implemented automated data pipeline with StandardScaler, SMOTE for class balancing, and train-test split validation
- Applied cross-validation and dropout regularization improving recall by 22%, evaluated using ROC-AUC and confusion matrix metrics
- Deployed model as REST API using Flask, demonstrating $500K potential annual cost savings through predictive analytics

Secure Authentication System with Database Management

PHP, MySQL, Python, REST API | GitHub

- Developed full-stack authentication system with REST API endpoints using PHP and MySQL, supporting 100+ concurrent users
- Implemented data cleaning and SQL query optimization reducing response time by 30%, with Git version control
- Deployed secure session management system reducing unauthorized access by 95%, documented API endpoints for production use

Certifications

Complete Data Science, Machine Learning, Deep Learning & NLP Bootcamp – Udemy (2024)

Introduction to Deep Learning – Infosys Springboard (2024)

Introduction to Natural Language Processing – Infosys Springboard (2024)

Computer Vision 101 – Infosys Springboard (2024)

Introduction to Data Science – Infosys Springboard (2024)

Introduction to Artificial Intelligence – Infosys Springboard (2024)

Achievements & Activities

1st Position – Innovation Day 2024, Amity University Rajasthan: Developed AI-powered solution using machine learning algorithms with real-time deployment, outperforming 50+ competing teams

Finalist – Prometeo 2025 ML Competition, IIT Jodhpur: Advanced to finals in prestigious national-level ML competition with predictive modeling project

Participant – Cognizance 2025, IIT Roorkee: Competed in Galactic Classification Challenge with 85%+ accuracy achievement

Robo Race Participant – Amity Techno-Cultural Fest 2024

Additional Information

Languages: English (Professional Working Proficiency), Hindi (Native), German (Elementary)

Tools: Git, GitHub, Jupyter Notebook, VS Code, Google Colab, Linux, MS Office