Anamika Suresh

Data Scientist

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Summary

B.Tech graduate in Information Technology with hands-on experience in machine learning, statistical modeling, and data analysis. Proficient in Python, with demonstrated ability to develop and implement data-driven solutions using Pandas, NumPy, Scikit-learn, TensorFlow, and PyTorch. Experienced in managing end-to-end data science projects from data preprocessing and EDA to model building, evaluation, and API deployment. Collaborative team player with strong analytical and problem-solving skills, focused on delivering actionable insights that drive business value.

Internship

Python Programming Intern -Verveox Technologies Jul 2025 – Aug 2025

- Engineered Python applications leveraging core programming constructs and optimized data structures to support analytical workflows.
- Implemented machine learning models using Scikit-learn for build foundational AI solutions. Architected and deployed data-driven web applications using the Flask framework to present analytical outputs effectively.
- Managed source code and collaborative development workflows using Git and GitHub.

Certifications

Data Science with Generative AI - Entri Elevate | Illinois | Tech NSDC Apr 2026

- Completed an industry-relevant program covering Python-based data analysis, statistical inference, and predictive modeling using Machine Learning, Deep Learning, and Generative AI techniques.
- Executed hands-on projects on real-world datasets, applying end-to-end data workflows from extraction to insight generation.

Introduction to Generative AI - Google Cloud Aug 2025

- Analyzed core concepts of Generative AI including large language models, use-case applications, and responsible AI principles. Evaluated ethical considerations and business implications of AI-generated content in analytical workflows.

Python | Machine Learning | Deep Learning - Kaggle Mar 2023

- Built practical proficiency in Python, ML algorithms, and deep learning architectures through structured, competition-grade exercises.

Education

B.Tech in Information Technology - Cochin University of Science and Technology 2020 – 2024
CGPA: 8.33/10 (Graduated with Distinction)

Technical Skills

Programming: Python, SQL
Machine Learning & AI : TensorFlow, Keras, PyTorch, NLP, Hugging Face Transformers, Generative AI
Data Science : Pandas, NumPy, Scikit-learn, EDA, Feature Engineering, Model Evaluation
Data Analysis: Exploratory Data Analysis (EDA), Data Preprocessing
Development & Tools: Flask, FastAPI, REST API, Streamlit, Git, GitHub, Docker, Jupyter Notebook
Databases: PostgreSQL, MySQL, SQLite

Projects

NOx Emission Prediction System - GitHub
Tools: Python, Flask, Pandas, NumPy, Scikit-learn, Random Forest, HTML, CSS

- Modelled a regression-based ML system on gas turbine sensor data to forecast NOx emissions, attaining 88.6% accuracy, supporting environmental compliance and process optimization. Applied statistical preprocessing techniques to clean and transform raw data, ensuring high data quality for reliable predictive modeling.
- Deployed the model as a RESTful API endpoint via Flask with a web interface for real-time emission forecasting and operational insight delivery.

Heart Failure Prediction System - GitHub
Tools: Python, Flask, PostgreSQL, PyTorch, KNN, HTML, CSS, JavaScript

- Implemented a classification model on the UCI Heart Failure dataset to predict patient risk, achieving 80.97% accuracy and generating actionable clinical insights for data-driven decision-making.
- Managed an end-to-end project pipeline integrating a Flask backend, PostgreSQL database, and AI chatbot for delivering a complete, cross-functional analytical solution. Developed a responsive frontend to present prediction outcomes clearly to non-technical stakeholders, improving interpretability of model results.

Loan Default Risk Prediction - GitHub
Tools: Python, Flask, Pandas, NumPy, Scikit-learn, Random Forest, HTML, CSS

- Developed a machine learning system to analyze financial data and predict loan default risk, achieving 89% accuracy, enabling reliable, data-driven credit risk assessment.
- Resolved class imbalance through targeted preprocessing and feature engineering, directly contributing to model robustness and prediction reliability. Deployed a Flask-based RESTful API with an interactive web interface for real-time loan default risk predictions.

Interview Assistant: Facial Emotion Detection - GitHub
Tools: Python, Flask, TensorFlow, Keras, OpenCV, NumPy, Pandas, Scikit-learn, HTML, CSS

- Architected a real-time Facial Emotion Recognition system across 7 emotion classes, achieving 61.6% accuracy, a strong benchmark for multi-class deep learning classification tasks.
- Integrated OpenCV-based webcam input with a Flask backend for live inference, enabling real-time emotion analysis from both uploaded images and video streams. Designed a user-facing web interface displaying emotion prediction results with confidence feedback, enhancing model interpretability for end users.

AI Image Generator using Stable Diffusion - GitHub
Tools: Python, Stable Diffusion v1.4, Diffusers

- Designed an AI-powered text-to-image generation pipeline using Stable Diffusion v1.4, applying state-of-the-art generative AI techniques to produce high-quality, prompt-driven visual outputs. Engineered an end-to-end prompt processing and image generation workflow via the Diffusers library, demonstrating practical application of large-scale generative models.
- Implemented automated image display and saving functionality through a Python-based GUI or notebook interface.

AI Chatbot using LLAMA Model and Streamlit - GitHub
Tools: Python, LLAMA (Ollama), Streamlit

- Explored and implemented a locally-deployed LLM-based conversational AI system using the LLAMA model via Ollama, demonstrating active participation in learning and applying new generative AI technologies.
- Extracted and managed conversational context across multi-turn interactions, applying NLP techniques to maintain coherent, stateful dialogue to translating technical model capabilities into a usable product. Built an interactive Streamlit frontend to present AI responses clearly to end users, demonstrating ability to communicate model outputs to non-technical stakeholders through intuitive UI design.