

Arafat Hossain Ankon

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Professional Summary

Data Scientist and AI Engineer with experience in Machine Learning, NLP, Computer Vision, and Generative AI. Skilled in Python, SQL, data preprocessing, feature engineering, exploratory data analysis (EDA), predictive modeling, and model evaluation. Experienced in building scalable AI solutions, analyzing structured and unstructured data, and transforming business requirements into data-driven solutions.

Technical Skills

Programming: Python, SQL, JSON, JavaScript

Business Intelligence: Power BI, DAX, Power Query, Dashboard Development, Data Visualization

Data Analytics: Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn, Excel, Jupyter Notebook

Machine Learning: Regression, Classification, Clustering, Feature Engineering, Cross Validation, Model Evaluation

Deep Learning: TensorFlow, PyTorch, CNN, Vision Transformer (ViT), Transfer Learning

NLP & Generative AI: LangChain, LangGraph, RAG, Prompt Engineering, Vector Databases

Database: PostgreSQL, Supabase

Tools: Git, GitHub Actions, Linux, Bash, Docker

Professional Experience

Junior AI Engineer

June 2025 – Present

Join Venture AI

- Collected, cleaned, and transformed structured and unstructured datasets to support business analytics and machine learning applications.
- Performed exploratory data analysis (EDA) to identify trends, uncover actionable insights, and support data-driven decision making.
- Developed analytical solutions that automated data processing and improved operational efficiency.
- Built predictive models and evaluated performance using statistical metrics and cross-validation techniques.
- Collaborated with cross-functional teams to gather business requirements and deliver scalable data-driven solutions.
- Improved model performance through feature engineering, testing, and iterative optimization.

AI Engineer

June 2023 – July 2025

Digital Garage

- item Built AI-powered applications using Python and modern NLP technologies.
- Conducted data analysis and A/B testing to evaluate system performance and improve solution quality.
- Automated data processing workflows to improve reporting efficiency.
- Integrated multiple data sources to support intelligent business applications.
- Optimized production workflows through data-driven experimentation and continuous improvement.

Projects

OralScan: AI-Based Oral Cancer Detection

GitHub

- Built deep learning models using CNNs and Vision Transformers for medical image classification.
- Performed data preprocessing, augmentation, and feature engineering.
- Evaluated models using Accuracy, Precision, Recall, F1-score, ROC-AUC, and cross-validation.
- Compared multiple architectures to identify the best-performing model.

TableTalk AI: Conversational Restaurant Ordering System

GitHub

- Developed a real-time voice AI assistant using Python, LiveKit, and Gemini.
- Built intelligent conversational pipelines using NLP and retrieval-augmented generation.
- Integrated dynamic menu information and contextual responses.

- Developed an end-to-end AI content automation pipeline.
- Integrated Perplexity AI, Gemini, and WordPress REST API.
- Automated content validation and publishing workflows.

Research & Conference Work

1. Standard AUC Evaluation Cannot Detect Shortcut Learning in Medical Image Classifiers: A Controlled Cross-Domain Study

ICCIT 2026 – International Conference on Computer and Information Technology

Focus: Medical Image Classification, Shortcut Learning, Cross-Domain Evaluation, Model Generalization, and Trust-worthy AI.

2. The Illusion of Accuracy: Quantifying Augmentation-Induced Data Leakage in Medical Image Classification

iCONECT 2026

Focus: Medical Image Classification, Data Augmentation, Data Leakage, Model Validation, and Reliable AI Evaluation.

Education

Bachelor of Science in Software Engineering

Daffodil International University

Major: Data Science

CGPA: 3.92/4.00

Research Interests

Business Intelligence, Data Analytics, Predictive Analytics, Machine Learning, Data Visualization, Explainable AI (XAI)

Soft Skills

Communication Collaboration Problem Solving Critical Thinking Adaptability Time Management

References

Dr. Imran Mahmud

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