

Archan Kundu Chowdhury

Data Science & Machine Learning Enthusiast

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PROFESSIONAL SUMMARY

Python developer pursuing MCA (BCA background) with hands-on experience building full-stack and backend applications using Python, Flask, Spring Boot, and React. Skilled in API development, object-oriented design, and integrating machine learning models into production-style applications. Strong foundation in Data Structures & Algorithms, version control, and containerization, with a track record of shipping multiple end-to-end projects independently.

TECHNICAL SKILLS

- **Languages:** Python, Java, SQL, MySQL, HTML, CSS, JavaScript (Basic)
- **Backend & Frameworks:** Flask, Spring Boot, Spring Security, RESTful API Development, LangChain
- **Frontend:** React, Tailwind CSS, Material UI
- **Core CS:** Data Structures and Algorithms, Object-Oriented Programming, Machine Learning, Deep Learning (ANN, RNN, CNN), NLP, Transformers, TensorFlow, scikit-learn
- **Tools & Platforms:** Git & GitHub, Docker, Linux & Unix (Basic), MongoDB, Microsoft Office
- **Soft Skills:** Problem Solving, Adaptability, Time-management, Teamwork, Leadership

EXPERIENCE

Harit Vikas Technologies Pvt Ltd

Data Analyst (Part-Time)

Feb 2025 – May 2025

Kolkata, India

- Built **Python (Plotly, Matplotlib)** scripts to process and visualize complex datasets, delivering interactive dashboards used directly by stakeholders.
- Engineered a data preprocessing pipeline to translate and standardize Bengali-language datasets to English for downstream analysis.
- Automated exploratory data analysis workflows to surface trends and key insights, packaged into structured stakeholder reports.

PROJECTS

- **AgroVeda – Smart Agriculture Assistance System** – Developing a Python-based backend integrating ML, Computer Vision, and IoT sensor data (soil moisture, PIR) to power crop recommendations and plant disease detection via image processing. [*In Progress*]
- **Facial Expression Recognition** – Built a CNN/Transfer Learning classifier in Python (TensorFlow); designed the full preprocessing and hyperparameter-tuning pipeline, improving accuracy from 42% (EfficientNetB0 baseline) to 66% on a 7-class FER dataset. [*Kaggle link*]
- **AI Therapist using LangChain & RAG** – Developed a React-Flask application with an LLM backend via LangChain and Retrieval-Augmented Generation (RAG); implemented prompt engineering, hallucination-mitigation logic, and an admin dashboard with automated evaluation metrics (BLEU, semantic similarity). [*GitHub link*]
- **Talkative – Real-Time Group Chat App** – Built a full-stack Spring Boot, React, and MongoDB application with REST APIs powering private/public rooms, post/like/comment features, and a User/Admin module with an Admin Monitoring System. [*GitHub link*]

TECHNICAL PROFILES

LeetCode - Regularly solving DSA problems in Python to strengthen algorithmic problem-solving.

Medium - Publishing from-scratch Python implementations of core Machine Learning algorithms.

EDUCATION

Techno Main Salt Lake	2024 - Present
Master of Computer Applications	CGPA: 7.7
Techno Main Salt Lake	2021 - 2024
Bachelor of Computer Applications	CGPA: 8.06
Bhatpara Amarkrishna Pathsala(H.S.)	2013 - 2021
Secondary & Higher Secondary Education with PCMB	Grade: 70.71% (X) & 81.2% (XII)

CERTIFICATIONS

- OCI Generative AI Professional (Oracle)
- 100 Days of Code: The Complete Python Pro Bootcamp (Udemy)
- Databases and SQL for Data Science with Python (Coursera)

LANGUAGES

English - Professional Bengali - Native Hindi - Professional Japanese - Elementary