

Anshu Pandey

India
GitHub: <https://github.com/anshupatna06>
LinkedIn: <https://www.linkedin.com/in/anshu-pandey-8a0ab0326/>
Email: anshupatna06@gmail.com

Patna,Bihar(India)
800026

EDUCATION

Bachelor of Technology (B.Tech)

Gurukul Kangri Deemed To Be University | 2024

SKILLS

Languages: Python, SQL

Machine Learning: Linear & Logistic Regression, Decision Trees, Boosting, SVM

Deep Learning: ANN, CNN, RNN, LSTM, GRU, Transformers (from scratch & PyTorch)

Data & Analytics: Pandas, NumPy, Feature Engineering, EDA

Backend & DB: PostgreSQL (Supabase), SQLAlchemy

Visualization: Streamlit, Matplotlib, Seaborn

Engineering Concepts: Data Pipelines, Drift Detection, Schema Migration, Idempotent Systems

PROJECTS

DSA Analytics & Learning Drift Detection

System:<https://github.com/anshupatna06/DSA-Analytic-System>

Python | PostgreSQL | Streamlit | SQLAlchemy

- Designed and deployed an end-to-end analytics system to track real-world coding activity with week-wise aggregation.
- Designed **date-driven week logic** using `week_start_date` to ensure correct aggregation despite irregular pipeline runs.
- Implemented **feature engineering** including lag features, rolling growth, ratios, and consistency metrics.
- Developed a **learning drift detection** system to identify inactivity, sudden drops, and declining trends.
- Led a production database migration from MySQL to PostgreSQL (Supabase), resolving auto-increment, transaction, and schema incompatibilities.
- Implemented **idempotent ingestion** logic to prevent duplicate daily snapshots.
- Added **data retention** policies to automatically clean old records and maintain long-term system stability.
- Built an interactive **Streamlit dashboard** with leaderboards, visual analytics, and drift alerts.
- System currently supports multi-platform user tracking with automated weekly aggregation and drift alerts

LLM-RAG Document QA:<https://github.com/anshupatna06/LLM-RAG-Document-QA>

- Implemented a Retrieval-Augmented Generation (RAG) system for document question-answering using embeddings and vector search
- Designed chunking, retrieval ranking, and prompt pipelines
- Tech: Python, LLMs, Vector DBs, Embeddings

CNN from Scratch (PyTorch):<https://github.com/anshupatna06/CNN-From-Scratch-Project>

- Implemented Convolutional Neural Networks from scratch in PyTorch with modular training, evaluation, and model architecture design
- Demonstrated understanding of backpropagation, convolutions, and optimization beyond high-level APIs

Machine Learning & Deep Learning (Scratch Implementations)

Python, NumPy, PyTorch

- Implemented **Regression, SVM, Decision Trees, and Boosting algorithms** from scratch to understand optimization and learning dynamics.
- Built **Artificial Neural Networks (ANN)** from scratch with manual forward and backward propagation.
- Implemented **CNN architectures** from scratch and in PyTorch, understanding convolution, pooling, and normalization.
- Implemented **RNN, LSTM, and GRU models** to learn sequence modeling and temporal dependencies.
- Studied and implemented **Transformer fundamentals**, including attention, encoder-decoder flow, and recurrence alternatives.

DATA STRUCTURES & ALGORITHMS

- Solved **hundreds of DSA problems** on LeetCode across arrays, strings, trees, graphs, DP, and sliding window patterns.
- Focused on **pattern recognition and optimization techniques** rather than brute-force solutions.
- Maintained a **consistent public learning log** through a LinkedIn “100 Days of DSA & ML” series.

