

Tanmay Patil

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Aspiring Data Scientist with 10 months of hands-on internship experience in forecasting, generative AI, and predictive modeling. Passionate about building scalable ML systems and leveraging deep learning to solve real-world problems.

Experience

Data Scientist Intern

Bangalore, KA

Genpact

Jan 2025 – Jun 2025

- Built a HITL pipeline for a **\$5.6B global insurance client**, **automating enhancements** to the underlying system and reducing manual effort by **60%**.
- Developed a pipeline to **automate BRIO sheet processing**, enabling seamless commentary generation and reducing manual effort.
- Proposed a solution for **highly realistic synthetic data generation** to enhance data diversity and **automate model training** while ensuring privacy preservation.

Data Scientist Intern

Remote

Vanquisher Software Services

Jun 2024 – Nov 2024

- Improved the data retrieval pipeline by upgrading it to handle semi-structured data, leading to a **28% average increase** in Precision@k for document retrieval.
- Performed **statistical analysis**, **data visualization**, and **time series modeling** to extract insights and inform technique development.
- Optimized processing efficiency by implementing **parallelization** in a large sequential pipeline, significantly improving **speed and performance**.

Education

NIIT University

Sept 2021 – June 2025

BTech in Computer Science, Data Science

- **GPA:** 9.5 (out of 10.0)

Projects

Multi-Generator SRGAN

[Github](#) [🔗](#)

- **Developed a high-performance**, multi-generator scaled down SRGAN for efficient super resolution tasks using **deep learning** and **neural networks**.
- Maintained **high perceptual quality** compared to the original SRGAN (PSNR: 20.64 dB) through effective **feature engineering** and **data-driven decision making**.
- Designed an **optimized** two-step training process for the Generator to enhance **adversarial learning**, allowing it to better compete with the Discriminator in a nuanced fashion.

Event Recommendation System

[Github](#) [🔗](#)

- Engineered an AI-driven recommendation system leveraging **neural networks** and **machine learning** to deliver **personalized** event suggestions based on user insights.
- Implemented **hybrid collaborative filtering** improved upon “Hybrid and Ensemble-Based Personalized Recommender System, Solving Data Sparsity Problem” by Akshay Shukla to mitigate **data sparsity** challenges.
- Achieved **59% RMSE** improvement using an MLP-based hybrid model for event recommendations. Enhanced performance by solving data sparsity challenges through ensemble methods.

Tabular Agentic Workflow

[Github](#) [🔗](#)

- **Developed an AI-driven agent ecosystem** that converts **tabular data** into an **SQLite** database and autonomously generates SQL queries.
- **Implemented an adaptive query correction system** that refines SQL queries using **custom graph design**, improving accuracy for complex queries by **up to 60%**.
- **Built the architecture and codebase**, integrating **LLMs** and **retrieval-augmented generation (RAG)** for efficient database interactions.

Technical Skills

Programming Languages & Tools: Python, R, SQL, TensorFlow, Keras, PyTorch, Scikit-learn, OpenCV, LangChain, Langgraph

Machine Learning & AI: Deep Learning, Neural Networks, GANs, LLMs, Reinforcement Learning, Model Fine-Tuning

Data Science & Analytics: Data Wrangling, Feature Engineering, Predictive Modeling, Statistical Analysis, A/B Testing, Data Visualization (Tableau, Power BI)

Generative AI & NLP: Transformer Models, Text Generation, Sentiment Analysis, Speech-to-Text, Embeddings

Big Data & Cloud: Spark, AWS, GCP, MLOps, Model Deployment, Docker, Kubernetes