

# Anant Tripathi

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## PROFESSIONAL SUMMARY

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Senior ML & AI Engineer with 5+ years building production AI solutions across LLMs, optimization, and predictive analytics. Led 25+ marketing mix projects, integrated GenAI models using Azure OpenAI, and deployed scalable MLOps pipelines. Expertise in RAG systems, PyTorch, TensorFlow, and translating business problems into measurable outcomes – 4 promotions in 3.5 years.

## EDUCATION

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### The University of Texas at Austin

Post Graduate Program in AI & Machine Learning | GPA: 4.13/4.33

Austin, TX, USA

Feb 2025 – Mar 2026

### Birla Institute of Technology and Science, Pilani

B.E. & M.Sc. (Integrated) in Electrical & Electronics | GPA: 7.62/10

Pilani, India

Aug 2016 – Jun 2021

## SKILLS

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**ML & AI:** Machine Learning, Deep Learning, Generative AI, LLMs, RAG, NLP, Computer Vision, Time Series

**Frameworks:** PyTorch, TensorFlow, Scikit-Learn, XGBoost, LightGBM, LangChain, LlamaIndex, Transformers, Keras

**Programming:** Python (5+ yrs), R, SQL, NumPy, Pandas, SciPy, FastAPI

**MLOps & Cloud:** Docker, MLflow, CI/CD, Airflow, AWS, GCP, Azure OpenAI, Databricks, Snowflake

**Databases & Other:** PostgreSQL, MongoDB, FAISS, Pinecone, Weaviate | Optimization: COBYLA, SLSQP, CCSA | A/B Testing

## EXPERIENCE

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### Axtria – Ingenious Insights

Project Leader – Data Science & Product Engineering

Bengaluru, India

May 2024 – Present

- Led end-to-end development of 10+ optimization capabilities (Portfolio Optimization, Multi-Level Constraints, Monthly Gating) achieving 95%+ on-time delivery with 98–100% error-free releases across enterprise pharma clients.
- Architected Pre/Post-Optimization APIs improving execution efficiency by 72% and reducing memory consumption by 63% for Fortune 500 pharma marketing analytics.
- Mentored 5+ data scientists and trained 70+ employees on Python, SQL, and optimization strategies.

### Axtria – Ingenious Insights

Senior Associate – Data Scientist

Bengaluru, India

May 2023 – Apr 2024

- Owned MMX enhancements: Grid Selection, COBYLA/SLSQP/CCSA algorithms, unequal time period handling – ensuring 99% bug-free UAT readiness.
- Led POCs including LSTM-based forecasting and MROI analysis; supported 30+ global MMM projects for Novartis brands (Jakavi, Kiskali, Entresto) across Poland and Germany.

### Axtria – Ingenious Insights

Associate – Data Scientist

Bengaluru, India

May 2022 – Apr 2023

- Delivered 10+ simultaneous MMX projects, designing split workflows (triplet to quadruplet execution) improving memory utilization by 63% and cutting execution time by 25%.
- Validated SLSQP optimization algorithm, defining improved bounds and objective functions using NLOPTR for enhanced reliability.

### Axtria – Ingenious Insights

Analyst – Decision Science

Bengaluru, India

Jul 2021 – Apr 2022

- Delivered Early Adopter Predictor using Random Forest and Logistic Regression, increasing HCP targeting adoption by 38% for pharma drug launches.
- Executed 5 MMM projects for top US pharma clients, building expertise in Ridge, Lasso, and Nudge Regression.

## KEY PROJECTS

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- **MarketingIQ – MMX Optimization (Python, COBYLA/SLSQP, Azure OpenAI, MLOps)** – Core technical lead on MMM framework with non-linear response modeling (S-curves, diminishing returns) and multi-channel spend optimization for enterprise pharma clients.
- **RAG Medical Assistant (LlamaIndex, Mistral 7B, FAISS, Python)** – Retrieval-augmented QA system over medical literature using LlamaIndex and Mistral 7B with FAISS vector store for semantic search.
- **Tourism Purchase Prediction & MLOps (XGBoost, MLflow, Docker, GitHub Actions, Streamlit)** – End-to-end MLOps pipeline with CI/CD, XGBoost training, MLflow tracking, Docker, and Streamlit deployment to Hugging Face Spaces.
- **Engine Predictive Maintenance (Python, Scikit-learn, MLflow, FastAPI)** – Predictive maintenance system for industrial engines using sensor time-series data with MLflow tracking and FastAPI serving.

## CERTIFICATIONS & AWARDS

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- **ML Specialization** – Stanford & Deeplearning.ai | **Deep Learning Specialization** – Deeplearning.ai | **GenAI** – IBM & Google Cloud
- **Right Brigade Award** – Core values & team leadership at Axtria | **Bravo Award** – High-quality delivery & client appreciation