Chinmay Arora

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AI Strategy & Systems Architect | Data Science & Governance | AI Systems Strategist with a Master's in data science and a focus on operationalizing Responsible AI. Expert in architecting **RAG pipelines**, designing **AI governance frameworks**, and leading **AI transformation** initiatives. Proven track record in the public and private sectors for translating complex AI capabilities into scalable, ethical, and high-impact business solutions. Specialized in bridging the gap between raw technical modeling and executive-level strategic planning

Core Competencies

AI Strategy & Governance: AI Risk Assessment (Bias/Fairness), Human-in-the-Loop (HITL) Design, AI Maturity Frameworks, Policy Alignment.
System Architecture: RAG Pipelines, LLM Orchestration (LangChain), Vector Databases, Microservices (FastAPI/Docker).
Technical Leadership: MLOps, Explainable AI (XAI), Cloud ETL (Azure/GCP), Cross-functional Stakeholder Management.

Experience

Graduate Research Assistant — AI Strategy & Governance

Hennepin County (CURA / HUP Program)   *Minneapolis, MN | 05/2025 – 01/2026*

- **Architected a County-wide AI Governance Framework**: Defined the standard for AI adoption by creating evaluation metrics for risk, fairness, and transparency, ensuring alignment with public-sector ethics and digital equity goals.
- **Operationalized Risk Matrices**: Evaluated departmental AI use cases using structured risk scoring (operational risk, public trust, and data privacy), leading to prioritized AI roadmaps.
- **Designed Decision-Support Systems**: Built community segmentation models (K-Means/DBSCAN) using Census and digital access indicators to optimize resource allocation for 1.2M residents.
- **Engineered Scalable Strategy Pipelines**: Developed automated Power BI and ETL workflows to standardize AI-enabled reporting, reducing manual data processing by 60% and enabling long-term strategic tracking.

Data Science Intern — AI Systems & Platform Analytics

MarketMaker Commercial Real Estate   *Remote, FL | 07/2024 – 09/2024*

- **Optimized data ingestion by 400%** by building robust Python ETL and web-scraping pipelines integrated with Azure and MongoDB.
- **Developed predictive valuation models (XGBoost)** and customer segmentation frameworks to provide actionable insights for commercial real estate investors.
- **Standardized CI/CD practices** for the data team, implementing modular code reviews and automated testing that reduced deployment errors by 30%.

Education

M.S. in Data Science | University of Minnesota, *Twin Cities, MN, USA*   **09/2023 - 12/2025**
Focus: AI Ethics, Visualization for AI Decision Support, Sequential Decision-Making, Geospatial Analytics.

B.Tech in Computer Science | SRM Institute of Science & Tech., *Ktr, TN, IND*   **06/2019- 05/2023**

Key Projects

Enterprise RAG System (MLOps & Governance Focus): Securely querying sensitive financial data from noisy PDFs. Designed a modular RAG system using **LangChain, ChromaDB, and Supabase**. Containerized the solution with **Docker and FastAPI**, implementing custom evaluation prompts and versioned embeddings to ensure 95%+ retrieval accuracy while maintaining strict data governance.

AI Strategy for Social Media Optimization (Bayesian + RL): Moving beyond black-box modeling to AI-driven planning. Built a trend-forecasting system using **NLP sentiment pipelines** and **Reinforcement Learning (RL)** to model influence maximization. Optimized campaign spending by treating AI as a decision-policy tool rather than a predictive-only model.

Technical Skills

AI/ML: RAG, LLM Fine-tuning, NLP, XAI (SHAP/LIME), Reinforcement Learning, Computer Vision. **Tools & Frameworks:** Python (Scikit-learn, PyTorch), LangChain, FastAPI, Docker, Git. **Data & Cloud:** SQL, BigQuery, Azure, GCP, MongoDB, dbt, Spark. **Strategy/BI:** Power BI, Tableau, Risk Assessment Matrices, KPI Design, UX for AI.