

# CHIRAG JAIN

## AI Engineering Manager | AI Architect | Principal Data Scientist

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### SUMMARY

**Data Science Leader with 15+ years' experience** (11 full-time, 4 freelance) **designing, deploying, and scaling ML, DL, and LLM-based** solutions across diverse industries. Currently focused on **Generative AI**, with deep expertise in **GPT, LLMs, and AI Agents** to accelerate innovation and deliver measurable business impact. Proven track record of helping organizations achieve both **topline growth and bottom-line efficiency**.

### EXPERIENCE

#### Data Science Manager - AI Architect

##### Bain & Company - NPS Prism

04/2024 - Present

- **Led and built a high-performing AI team (8 Data Scientists, 2 Data Engineers)** to modernize NPS Prism with **AI-driven automation**, deploying scalable solutions using **Docker and Kubernetes**
- Built **Text-to-SQL** solutions using Generative AI/LLMs fine-tuned on domain-specific schemas, improving query accuracy by 30–40% and enabling self-service analytics across business teams
- Designed and deployed **multi-domain RAG chatbots fine-tuned with LoRA**, integrated with **n8n, LangGraph**, and **CrewAI** for workflow orchestration and multi-agent collaboration, using **MCP** for context exchange
- Improved survey data quality by detecting **fraudulent** and low-value responses through **AI-based content validation**, saving \$4M annually and enabling more reliable insights
- **Implemented RLHF pipelines** to optimize LLM responses for business-specific tasks, aligning model outputs with analyst preferences and improving factual accuracy and relevance by 25%

#### Data Science Manager (AVP)

##### Citi

02/2023 - 04/2024

- **Managed a team of 7 data scientists** to architect and deploy a **GenAI-powered voice analytics pipeline** leveraging speech-to-text models, LLMs, and **embedding-based clustering** to process 50M+ customer calls and extract complaint themes, sentiment, and intent at scale
- **Optimized end-to-end LLMops workflows** using Docker, Kubernetes, and **CI/CD for scalable model training** and deployment, enabling targeted AI-driven interventions that reduced complaint volume and delivered \$14M in cost savings and \$72M in incremental revenue
- Data Size - **12 million calls per year, 30 million customers & 2 billion touchpoints** | Tech Stack - OpenAI's Whisper, BERT-based QnA, Flax T5 & Llama

#### Research Data Science Manager (AVP)

##### Barclays Investment Bank

01/2022 - 12/2022

- Led and managed a team of 5 research data scientists to develop **deep learning models (LSTMs and transformer-based architectures)** that analyzed news articles and quarterly reports to quantify their influence on stock price movements
- **Authored two research papers** for Barclays Data & Investment Science, exploring the use of Natural Language Processing to predict stock prices
- Data Size - **500 million news articles, 600 billion market data points** | Tech Stack - Python, PySpark, Azure, NLP, Transformers, LLMs, Topic Modeling, Regressions, Neural Networks

### EDUCATION



#### Bachelor of Technology (B.Tech)

##### National Institute of Technology (NIT) Kurukshetra

2010 - 2014



#### Post Graduate Diploma - Data Science (Gen AI)

##### International Institute of Information Technology (IIIT) Bangalore

2024 - 2025



#### Master of Science (MS) - Gen AI

##### Liverpool John Moores University

• Ongoing

### SKILLS

#### Management Skills

Leadership, Strategic Planning, Decision Making, Time Management, Sprint Planning, Crisis Management, Resource Allocation, Budgeting, Team Hiring & Development

#### Artificial Intelligence - AI (LLMs & Agents)

Llama, OpenAI, LangChain, AutoGPT, Hugging Face, BabyAGI, CrewAI, AutoGen, GPT, BERT, Flax T5, Claude, Mistral, Gemini, RAG, Fine-Tuning, Prompt Engineering

#### Machine Learning & Deep Learning

Supervised & Unsupervised Learning, Neural Networks, Reinforcement Learning, Computer Vision, Time Series Forecasting, Natural Language Processing (NLP)

#### Programming

Python, PySpark, Scala, SQL, HTML, MATLAB, SAS, R, JavaScript

#### Analytics

Statistics, A/B testing, Tableau, Power BI, Excel, Power Point, Cohort & Retention Analysis, Funnel Analysis

#### Data Engineering

Apache Airflow, dbt (Data Build Tool), Kafka, Flink, Apache Beam, Informatica, Talend, AWS Glue

#### MLOps & LLMops

Docker, Kubernetes, Git, SageMaker, Lambda, S3, EC2, ML Studio, MLflow, TensorFlow Serving, Weights & Biases, Vector Database

## EXPERIENCE



### Lead Applied Data Scientist

**dunnhumby (part Of Tesco Group)**

10/2018 - 01/2022

- Worked on **big retail transaction-level datasets** to develop and implement ML/DL models to identify optimal **Pricing, Promotion, & Assortment** strategies for leading global retailers in the world
- Built a **recommendation system** for **Tesco** to identify **top personalized offers for users**, leveraging collaborative filtering, user-item embeddings, and purchase history analytics
- **Data Size** - ~100 billion item level transactions per year | | Tech - Python, PySpark, GCP



### Senior Data Scientist

**Tredence**

09/2015 - 09/2018

- Developed machine learning classification models to classify **3M SKUs into predefined product hierarchy**
- Built unified customer profiles using demographic segmentation and behavioral clustering
- Designed and enhanced multiple dashboards for a leading retailer tracking customer experience metrics



### Data Scientist

**Forgify 3D Tech**

07/2014 - 09/2015

- Improved performance accuracy by 25% through creating **20+ dashboards** for real-time metric tracking.
- **Improved ROAS by 20%** by optimizing spending across 3 marketing channels.



### Freelance Data Scientist

**Codementor**

07/2010 - 06/2014

- **Completed 300+ Data Science projects with an average rating of 4.98/5**
- Profile Link - <https://www.codementor.io/@chiirag>
- Developed and delivered 150+ projects using various ML/DL techniques
- Created 50+ dashboards using Tableau, Power BI, Dash, Plotly, Matplotlib, Seaborn

## AWARDS & ACHIEVEMENTS



### AI Transformations Award

Bain & Company



### AI Trainer

Conducted AI fundamentals training for 250+ Bain employees



### Excellence in Innovation Award

Citibank



### Published 2 Research Papers

Barclays Investment Bank



### Pinnacle Performer Award

Dunnhumby

## CERTIFICATION

**Deep Learning Specialization**

**Machine Learning Specialization**

**PyTorch for Deep Learning**

**TensorFlow Developer Certificate**

**Artificial Intelligence A-Z**

**Deep Learning: Natural Language Processing with Transformers**

**Learn LangChain, Pine cone & OpenAI: Build Next Gen LLM Apps**

## INTERESTS



**Puzzles**



**Travel**



**Philosophy**