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smriti-kotiyal

Smriti Kotiyal (Raju)

Data scientist and AI/ML engineer with a strong foundation in data systems and a background in software engineering. Experienced in building scalable ML pipelines on AWS and GPT-3-powered conversational agents, with a focus on responsible, end-to-end AI solutions.

Technical Skills

Languages	Python, R, SQL, SPARQL
ML & AI	Scikit-learn, NLP, Classical ML (RF, LR, NB), LSTM, DistilBERT, RAG, Deep Learning, Statistical Modeling
ML Pipelines	LLM-based RAG pipelines, GPT-3.5 API, Model serving, Flask API deployment, Version control for models
Backend Systems	REST APIs, Flask, Ansible, Basic infrastructure automation, Data validation pipelines
Data Platforms	BigQuery, GraphDB, MySQL, ETL (Microsoft SSIS), Metadata APIs, Multi-source sensor data integration
Cloud Platforms	AWS, GCP, Azure ML Studio
Visualization & UI	Matplotlib, Seaborn, Jupyter, Flask Dashboards, Folium
Tools	Git, GitHub, VS Code, Basic HuggingFace, LangChain, Protégé

Education

Aug 2025 **M.S. in Information Management (Data Science), GPA: 3.92/4.0**, *University of Washington, Seattle*

Sep 2020 **M.Sc. in Big Data Science and Technology, Score: 86%**, *University of Bradford, UK*

Aug 2016 **B.Tech in Computer Science Engineering, GPA: 9.0/10.0**, *Graphic Era University, India*

Professional Experience

Dec 2025 - Present **Data Analyst Contractor, GTM Analytics**, *Qualtrics, USA*

- Migrating **250+ SQL tables to DBT** in AWS Redshift, improving pipeline reliability and scalability
- Developing a RAG-based analysis tool over internal ticket data **to drive a 45% reduction in ticket volume**
- Redesigning target consumption reports for sales teams, **improving visibility into rep-level usage in Tableau**

Sep 2024 - Aug 2025 **Software Developer**, *University of Washington, USA*

- Built scalable Python/R pipelines for quarterly publications ingestion, **cutting processing time by 92%**
- Embedded OpenAlex & Unpaywall APIs to automate metadata extraction, **saving 4+ hours per cycle**
- Released a CLI tool with logging and error handling to validate authorization for **5000+ research publications**
- Optimized faculty research submissions by coordinating **20+ DOI compliance requests within a 1-week SLA**

Apr 2021 - Apr 2023 **Artificial Intelligence and Machine Learning Engineer**, *University of Bradford & AYJ Solicitors, UK*

- Built a GPT-3 powered conversational agent in Python for immigration casework, **saving users £250 per real-time query**
- Developed a **700-node UK work visa ontology** using Protégé and Python, enabling semantic reasoning over legal archives
- Deployed Flask web app automating **SOC classification with 85% ML accuracy, cutting time from 45 to 5 minutes**
- Automated ML pipelines on AWS using Ansible, **improving deployment speed by 75%**

Sep 2020 - Jan 2021 **Research Assistant**, *University of Bradford, UK*

- Created **real-time GraphDB + Flask pipeline for 20+ IoT sensors**, monitoring city-wide air quality with live dashboards
- Designed **interactive D3.js + BigQuery dashboards for 50000 BIHR patient records** to reveal health patterns
- Used **engineering best practices for source control with GitHub, improving code quality and team collaboration**

Jul 2016 - Aug 2019 **Systems Engineer**, *Infosys, India & Australia*

- Orchestrated **12–14GB daily ETL workflows via Microsoft SSIS**, reducing manual effort and ingestion failures
- Programmed a real-time C# based alert system **reducing ETL pipeline monitoring needs by 95%**
- Led **40+ deployment transitions as part of enterprise migration from Windows Server 2002 to AWS-hosted 2010 systems**
- Diagnosed and **resolved 150+ production SQL/UNIX issues** during major infrastructure rollouts

Projects

Apr 2025 - Jun 2025 **Decision Support System for Consumer Financial Complaints [Link]**, *University of Washington, USA*

- Engineered **DistilBERT + RAG classifier for 15K+ complaints, boosting monetary relief recall from 17% to 90.5%**
- Forged **FAISS index with LangChain chunking for 200+ policies, enabling fast semantic search on 40K+ tokens**
- Integrated **policy embeddings with GPT-3.5 to deliver policy-grounded reasoning**, improving dispute resolution explanations
- Delivered **real-time predictions and human overrides through a Python Flask dashboard** for triaging complaints

Jun 2020 - Sep 2020 **Predictions for Space Weather Applications (MS Thesis)**, *University of Bradford, UK*

- Achieved **78% solar flare forecast accuracy using LSTM on 20 years of satellite time-series data**
- Improved dataset quality **by 30.95% by merging NGDC and SolarMonitor.org for robust model training**
- Designed **a Python Tkinter-based desktop tool to automate solar data retrieval** and accelerate research workflows

Publications & Presentations

ESWC 2022 Presented: **"Knowledge Graph-based Conversational Agent for UK Immigration Case Work"** in Greece [Link]

CHI 2026 Recent: **"Relief or displacement? How teachers are negotiating generative AI's role in professional practice"**