Mayank Grover

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Open to relocation | OPT EAD US Work Authorization (Until July 2028)

Technical Skills

Languages & Tools: Python, SQL, Git, Jupyter, MLflow

Machine Learning: Scikit-learn, PyTorch, OCR, A/B Testing, Forecasting, Regression, Classification, Time Series

Data Engineering: Spark, Databricks, Snowflake, AWS (Lambda, S3, SageMaker), BigQuery, DBT

Visualization: Tableau, Power BI, Excel

Certifications: AWS Cloud Foundations, Azure AI Fundamentals

Experience

George Mason University   May 2025 – Present
Research Assistant
- Conducting **user research** on **privacy and ethical issues** in **healthcare robotics** to inform **human-centered AI design.**
- Analyzing **deepfake detection methods** and societal impact through literature review and **data-driven evaluation.**
- Developing a prototype to **mitigate prompt injection attacks** in **RAG systems** using **contextual risk scoring.**

Precise Software Solutions   Jan 2025 – May 2025
Data Scientist
- Engineered an **AI pipeline** with **CNN-based** face, age, vape-type, & cartoon **detection**, integrated with **OCR** for image-text extraction.
- Built **87%-precision classification model** for **policy violations**, **streamlining compliance workflows**.
- Built classification models to flag non-compliant marketing visuals, **streamlining review cycles** and **reducing manual effort by 40%**
- Deployed **monitoring pipelines** using **AWS** to **automate campaign compliance tracking** and **analytics.**

Tata Consultancy Services   Apr 2022 – Apr 2023
Data Scientist
- Led **A/B testing** and **engagement analysis** across marketing and product funnels to optimize targeting and retention strategies.
- Delivered **end-to-end marketing analytics workflows** using **Python** and **SQL**, **driving a 9% improvement** in **campaign conversion KPIs**.
- Partnered with **growth** and **UX teams** to **uncover actionable insights** from **user behavior** and **campaign performance**.

Tata Consultancy Services   Aug 2021 – Apr 2022
System Engineer
- Developed and **optimized sales forecasting models** using **Python** and **MySQL**, increasing **accuracy by 15%.**
- Engineered **scalable data storage** and **real-time monitoring** with **AWS** & **Kibana** to ensure reliable data operations.
- Supported **cross-functional teams** with **ad-hoc SQL analysis** and **dashboard-ready datasets** to improve **decision-making**.

Megasoft Solutions   Jun 2019 – Aug 2019
Data Analyst
- Cleaned and analyzed data using **MySQL, Excel,** and **Python** to **uncover attrition trends** and **support compliance** and **retention strategies**
- Designed **interactive dashboards** and **visualizations**, enabling leadership to make **data-driven decisions 20% faster.**
- Maintained detailed data documentation and audit trails for reporting accuracy and regulatory alignment

Codec Networks   Dec 2018 – Feb 2019
Data Scientist
- Performed **EDA** and **feature engineering** on **healthcare claims data**, improving data quality for analysis.
- Developed a **risk prediction model** using **logistic regression**, identifying high-risk patients with **80% accuracy**.
- Integrated patient records from multiple sources, **enhancing data completeness** and enabling more **comprehensive insights**

Projects

Sentiment Aware Price Forecasting with Fine Tuned LLMs
- Fine-tuned FinBERT for sentiment analysis on marketing headlines to simulate campaign ROI impact. Combined sentiment and ad spend in a hybrid pipeline to improve targeting. Integrated external sentiment with financial data in a RAG-style setup to enhance price prediction.

Accidental Deaths Due to Drug Overdose
- Performed EDA on accidental drug overdose deaths in Connecticut, USA. Built a regression model to predict the most likely substance used based on individual demographics. Evaluated model performance using Mean Squared Error (MSE) of 28.4.

Education

George Mason University   Aug 2023 - May 2025
*Masters in Data Analytics Engineering, **GPA:** 4.0/4.0*   *Fairfax, VA*
Courses: NLP, Deep Learning, Machine Learning, Data Mining, Predictive Analytics, Big Data, Data Visualization, AI, Statistics

Publication

PRoSec-HRI: A Systematic Review of Privacy and Security in Healthcare Robotics Interaction, Grover, M., Das S., Proceedings of the 2025 International Conference on Social Robotics (ICSR), Italy. Identified autonomy-related threat models and secure multimodal processing strategies.