Jingyuan Liu

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EDUCATION

Boston University, Faculty of Computing & Data Sciences September 2024 – January 2026
Major: Master of Data Science, Cumulative GPA: 3.74/4.0
Course: Tools for Data Science (4.0), Data and Ethics (4.0), Topics in Data Science Methodology (4.0).

University of International Business and Economics, School of Information Technology & Management
Major: Data Science and Big Data Technology, Cumulative GPA: 3.47/4.0. September 2019 – June 2023

PROFESSIONAL EXPERIENCE

Just Horizons Alliance (JHA), Benchmark Research Assistant June 2025 – January 2026

- Co-developed an ethics-oriented LLM benchmark (AIEI), inspired by HELM, using a hierarchical tree-based architecture to assess model behavior across ethical, transparent, fair, safety, etc. dimensions.
- Engineered a multi-level scoring framework, including generating specialized adversarial datasets, scoring prompts and temperature-controlled testing based on existing compliance (e.g. EU AI Act, GDPR, NIST).
- Built end-to-end evaluation pipelines supporting both local LLMs (e.g., LLaMA) and API-based models (e.g., Gemini), automating prompt execution and score aggregation for cross-model comparison.

Institute of Automation, Chinese Academy of Sciences September 2023 – March 2024
Research Assistant on an NLP-centric MultiModal Biological Experiment Agent

- Engineered a LangChain-based autonomous Protocol Generation Agent that translates upstream computer vision outputs into robotic orders, bridging the gap between visual inputs and hardware action.
- Fine-tuned the LLM, implemented Few-shot & CoT prompting and designed a mapping layer to eliminate hallucinations and improve speed, achieving 98% stability and a 57% reduction in end-to-end latency.
- Developed a KBQA system powered by RAG architecture, utilizing Faiss embedding and Markdown data to enable precise natural language queries over 20,000+ experimental protocols.

PROJECTS

How do Terms of Service Influence Social Media User Dynamics March 2025 – January 2026

- Integrated Value Sensitive Design and Social Amplification of Risk Framework to study how platform policy changes are translated into collective responses, formalizing privacy anxiety as an intermediate.
- Developed a pipeline using LLMs for automated textual analysis and Topic Modeling (LDA/BERTopic) to process 3 months of social media metadata and ToS updates, identifying 3+ shifting themes in user sentiment.
- Engineered a data visualization suite using Time-Series plots and Diffusion Diagrams to map the velocity and transition of risk perception across digital communities.

Bias Detection in Social Media Content September 2024 – May 2025

- Deployed a full-stack data architecture on Azure using Resource Manager, built robust ingestion pipelines for batch (SBIC dataset) and hourly streaming (Bluesky API) using within a medallion architecture.
- Trained a fine-tuned BERT-based classifier for gender/racial bias detection, achieving 88.62% accuracy.
- Implemented Azure Functions and ML endpoints for real-time inference on streaming data, developed interactive PowerBI dashboards for with 6-hour refresh cycles enabling near real-time analysis.

SKILLS

Programming: Python (NLP, Web-scraping, Scikit-learn), LLM, GenAI, Prompt engineering, MATLAB, R, SQL.
Software: Google Cloud Platform, Tableau**,** Power BI, Azure, Gephi, Vensim, UIBOT, Looker Studio.