

Jiayi Xu

xujiayi@unc.edu | <https://jiayixu17.github.io>

EDUCATION

The University of North Carolina at Chapel Hill

M.S. in Statistics and Operations Research

Chapel Hill, NC

Sept. 2024 - June 2026 (expected)

- Selected courses: Machine Learning, Deep Learning, Data Mining, Applied Statistics, Foundations of Optimization, Stochastic Modeling & Decision Analytics, Advanced Microeconomic Theory

The China University of Geosciences

B.M. in Information Management and Information Systems

Wuhan, China

Sept. 2019 - June 2023

- Selected courses: Management Information System, Electronic Commerce, Decision Support Systems, Operations Research, Database Principle, Principles of Economics, Marketing
- GPA: 91.20/100, Top 10%

RESEARCH INTERESTS

Human-AI Collaboration; AI and Human Behavior; Generative AI & Large Language Models (LLMs)

PUBLICATIONS & WORKING PAPERS

- Jiayi Xu**; Shuang, Zhang; Zhen Zhu; Lincan Zou; and Mengting Yang, “Exploratory Research on Knowledge Graph Construction and Attribute Value Extraction for Large-scale Textual Data of Tourism Products” (2022). WHICEB 2022 Proceedings. 19. <https://aisel.aisnet.org/whiceb2022/19>
- Working paper: “Cross-Linguistic Differences in Mental Health Stigma Expressed by Generative AI and Its Implications for Downstream Applications”, (with Xiyang Hu)

PRESENTATIONS

Invited Speaker: “Can AI-Generated Stories Heal the Heart?”, INFORMS Annual Meeting 2025. Joint work with Junyu Yao, Qiaoxiang Hu, Wendao Xue, and Yifan Yu.

SELECTED RESEARCH EXPERIENCE

Cultural and Linguistic Influences on LLM Responses

W. P. Carey School of Business, Arizona State University

Tempe, AZ (Remote)

Research Assistant (Advisor: Prof. Xiyang Hu)

July 2025 - Present

- Designed and conducted experiments to examine cross-linguistic differences in mental health stigma and related behavioral expressions generated by major LLMs (e.g., GPT-4o, DeepSeek, Qwen-3).
- Performed group-comparison analyses revealing that LLMs exhibit higher levels of mental health-related stigmatization in Chinese contexts than in English contexts.
- Examined downstream impacts of these stigma-related tendencies; for example, in mental health stigma detection tasks, LLMs are less sensitive to stigmatizing expressions in Chinese.

AI-Generated Stories for Emotional Support

McCombs School of Business, The University of Texas at Austin

Austin, TX (Remote)

Research Assistant (Advisor: Prof. Yifan Yu)

Jan. 2025 - Present

- Synthesized relevant literature and theories to identify the mechanisms underlying AI-generated story support, forming the theoretical foundation and hypotheses of the study.
- Designed and implemented a multi-condition lab experiment comparing story-based AI interaction with traditional conversational AI.
- Analyzed experimental data to test hypothesized effects and potential mechanisms, including group comparison tests and regression-based mediation analyses.

Graph-Based Modeling of Product Homogeneity and Performance Prediction in E-Commerce

School of Economics and Management, China University of Geosciences

Wuhan, China

Research Assistant (Advisor: Prof. Zhen Zhu)

May 2021 - May 2023

- Built a large-scale textual dataset by crawling and preprocessing 42,000+ tourism product descriptions from Ctrip.com (Chinese largest travel platform), and developed a nine-dimension product entity structure based on prior literature.
- Extracted product entities using BERT-BiLSTM-CRF and merged semantically similar entities; constructed a Neo4j knowledge graph integrating products, attributes, and relations.
- Quantified product homogeneity across suppliers by computing cosine similarity and Adamic-Adar link-prediction metrics on supplier-product graphs.
- Constructed a 42-feature dataset and trained XGBoost models for sales-trend prediction, using SHAP for model interpretability and feature attribution.

Term Set Expansion and Text Similarity Measurement

Tongji University

Shanghai, China

Research Intern (Advisor: Prof. Changrong Lu)

Apr. - Aug. 2022

- Employed TF-IDF vectorization with similarity-based retrieval (cosine similarity) to expand the initial geopolitical risk corpus through semantically matching the past 20-year journals.
- Implemented term set expansion, including training word embedding model (Word2vec), manual annotations, and building classification models using classification models (e.g., Random Forest).

TEACHING EXPERIENCE

University of North Carolina at Chapel Hill

Chapel Hill, NC

Teaching Assistant – STOR 320: Introduction to Data Science

Aug. 2024 - May 2025

- Graded assignments, and exams for undergraduate students.
- Provided guidance and answered students' questions on course materials and assignments.

SELECTED PROFESSIONAL EXPERIENCE

Didi Chuxing (Beijing) Co., Ltd.

Beijing, China

Data Analyst Intern - Strategic Development Division

Sept. - Dec. 2022

- Utilized SQL, Excel, and Tableau to collect, preprocess, analyze, and visualize driver and passenger data (across 45 cities), including behavioral features and transaction amounts.
- Monitored weekly data fluctuations and anomalies based on business logic, conducted root-cause analysis, and delivered analytical reports to stakeholders.
- Applied statistical methods (A/B testing, DID) to evaluate the marketing effectiveness of the platform.

PricewaterhouseCoopers (PwC) Acceleration Center

Shanghai, China

Assistant Data Engineer Intern - P&T Digital

June - Aug. 2022

- Designed data models; Built and maintained SQL Server databases to achieve business needs.
- Assisted to improve a risk assessment algorithm by constructing the Bayesian Network.
- Championed the Data Scientists team in achieving AI-driven automatic parsing tasks of PDF documents, including text data annotation and preprocessing.

DF&P Strategy Consultants

Shanghai, China

Strategy Consulting Intern

July - Oct. 2021

- Conducted product demand analysis for a music company by collecting data across financial, educational, communication, and socio-cultural domains to identify user needs.
- Led the team in market positioning and competitive analysis using SWOT and PEST frameworks.

RESEARCH SKILLS

Research Methods: Lab experiment design; statistical analysis (t-tests, ANOVA, regression, mediation); machine/deep learning & NLP; prompt engineering & LLM experimentation.

Technical Proficiencies: Python, R, SmartPLS, LaTeX, Excel, SQL, Java, C, Tableau, Mathematica.