Jade Cheng

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EDUCATIONS

Duke University   Durham, NC
Master of Science in Statistical Science   *Aug 2025 – May 2027(Expected)*
Communication University of China   Beijing, China
Bachelor of Engineering in Data Science   *Sep 2021 – June 2025*
- GPA: 3.80/4.00 Ranking: 10%
- SQL, Python, Data Visualization, Statistical Modeling, Machine Learning, LLM

TECHNICAL SKILLS

Programming: Python(scikit-learn), SQL, C++, R
Analysis & Statistical: Statistical Modeling, Machine Learning, Deep Learning, A/B Testing
Data Engineering: ETL Pipelines, Spark, Hadoop, AWS (S3, Athena)
Language: Mandarin (Native), English (Advanced)
Additional: Teamwork, Communication, Time-management

EXPERIENCES

News Recommendation System with LLM Explanation | *ML, NLP, LLM*   Aug 2024 – May 2025
- Built a **personalized news recommendation system** using the MIND dataset, implementing a **data preprocessing pipeline** for cleaning, user behavior sequencing, and feature engineering.
- Implemented and evaluated multiple **recommendation models** (TF-IDF, DKN, NRMS, NAML) using **scikit-learn and PyTorch**, selecting an optimal multi-view architecture based on model performance.
- Integrated **LLM-based natural language generation** via API calls to produce interpretable explanations for recommendations.
- Deployed a **Python-based backend** with database support and a **Vue.js frontend**, demonstrating an **end-to-end machine learning workflow** from data preprocessing to user-facing insights.

User Behavior Analytics (Tourism Planning) for China Mobile | *ETL, Spark*   Jun 2024 – Jul 2024
Data Analyst Intern   *Beijing, China*
- Analyzed large-scale mobile user behavior data using **SQL on Spark/Hadoop**, processing millions of user–location records to study travel patterns across regions and time.
- Built an **analytics pipeline** to clean, aggregate, and engineer behavioral metrics including **DAU/MAU**, visit frequency, peak-time density, and scenic spot rankings.
- Delivered data-driven insights through **Power BI dashboards**, supporting tourism planning, demand forecasting, and targeted marketing decisions based on user mobility trends.

Software Center of the Industrial and Commercial Bank of China   Jun 2023 – Aug 2023
Data Analyst Intern   *Beijing, China*
- Analyzed **12 months** of customer activation and transaction data (**100k+ users**) using **SQL**, identifying age-segmented behavioral patterns and seasonality effects in user growth.
- Performed **statistical analysis and EDA** to segment users across JD.com and Meituan platforms, uncovering adoption gaps with **70%+ unbound users**.
- Designed and evaluated **A/B testing experiments** across multiple acquisition channels, achieving an **18% improvement** in overall conversion performance.
- Built **Power BI dashboards** to track activation funnels, conversion rates, and cohort-level metrics, enabling cross-functional stakeholders to monitor performance and make data-driven decisions.