

# Jade Cheng

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## EDUCATION

### Duke University

*Master of Science in Statistical Science*

Durham, NC

*Aug. 2025 – May 2027*

### Communication University of China

*Bachelor of Engineering in Data Science*

Beijing, China

*Sep. 2021 – June 2025*

- Major GPA: 3.80/4.00 Top 10%
- Data Structure, SQL, Python, Probability, Machine Learning, Data Visualization

## EXPERIENCE

### Software Center of the Industrial and Commercial Bank of China

June 2023 – Aug 2023

*Data Analyst Intern*

*Beijing, China*

- Analyzed 12 months of customer card activation, transaction, and app binding data for users aged 18-22 using **SQL**, identifying a 130.97% surge in new activations during the back-to-school season.
- Segmented user binding data to identify significant adoption gaps: 70.47% of target users unbound on JD.com and 56.13% on Meituan, providing data-driven insights to inform partnership and marketing strategies.
- Designed and executed a multi-variant **A/B test** for a card-binding campaign; used **SQL** for real-time monitoring of **CTR** and conversion rates to optimize channel selection and push timing.
- **Collaborated with cross-functional teams** (legal, algorithms, operations) to implement the campaign, resulting in an 18% increase in overall conversion, 25% lift on JD.com, 22% on Meituan, and a 15.6% CTR.

## PROJECTS

### User Behavior Modeling for an Online Crossword Game | *Time-Series Model*

Nov 2023 – Feb 2024

- Constructed system dynamics models to capture player behavior mechanisms and quantify churn differences across game modes using official gameplay data.
- Applied **ARIMA time-series** models to forecast future player counts, incorporating novelty effects, game difficulty, and advertising impact to support model-driven optimization recommendations.

### Behavior Analysis and Visualization for China Mobile | *SQL, PowerBI*

June 2024 – July 2024

- Designed and optimized a **MySQL database** for large-scale mobile signal data and created interactive **Power BI dashboards** that integrated China Mobile user distribution patterns, visualizing real-time visitor density, attraction clustering, and demographic profiles to enable data-driven resource allocation and visitor management.

### Neural News Recommendation System with LLM Explanation | *Prompt, ML*

Dec 2024 – May 2025

- Processed and engineered the MIND dataset using **Pandas and NumPy**, including missing-value handling, feature normalization, and text tokenization; evaluated multiple **deep learning models** (DKN, NRMS, NAML) through parameter tuning to select the optimal algorithm, and integrated the DeepSeek API with **prompt engineering** to generate natural-language explanations for news recommendations based on user history and interests.

## TECHNICAL SKILLS

**Programming Languages:** Python, SQL, C/C++, R

**Analysis & Statistical Techniques:** Statistical Modeling, Machine Learning, A/B Testing

**Data Tools:** Tableau, Power BI, Excel

**Libraries:** Pandas, NumPy, Matplotlib

**Additional:** Teamwork, Communication, Time-management