

# JIAXIN LI

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## EDUCATION

SungKyunKwan University, South Korea

03/2021 – 02/2025

Bachelor's Degree in Data Science

Cumulative GPA: 3.63/4.5 (91.3/100)

**Relevant Coursework:** Data Science and Python, Introduction to Data Structures and Algorithms, Computer Structure and System, Operating Systems, Introduction to Machine Learning, Data Mining, Computer Networks, Software Engineering, etc.

## RESEARCH EXPERIENCE

### Korea-China Relations Issues Analysis Based on Topic Modeling

03/2024 – 06/2024

Analyzed online news comments related to South Korea and China from 2019 to 2023 to uncover sentiments of South Korean and Chinese citizens regarding their evolving relationship. Key components included:

- Collected and processed 28,995 comments using web scraping techniques from Naver News and Sina Weibo.
  - Applied *Latent Dirichlet Allocation (LDA)* to identify prominent discussion topics, grouping comments into themes such as political tensions, economic concerns, and cultural friction.
  - Sentiment analysis was performed to identify positive and negative emotions using the *KNU Korean Sentiment Dictionary* for Korean reviews and the *Harbin Institute of Technology Sentiment Dictionary* for Chinese reviews.
  - Visualized findings with tools like *word clouds* to highlight common discussion themes.
- Results revealed a notable rise in negative sentiment, particularly around issues like economic nationalism, COVID-19 blame, and geopolitical conflicts.

### Beer Recommendation System Using Collaborative Filtering and PageRank

09/2023 – 11/2023

Developed a beer recommendation system based on user ratings to enhance personalized recommendations. Key components included:

- Implemented a *collaborative filtering* approach using *Nearest Neighbors* with *cosine similarity* to recommend beers based on user preferences.
  - Constructed a *rating graph* and applied a *personalized PageRank* algorithm to rank beers.
  - Validated high accuracy through *A/B testing* and *t-tests*.
  - Analyzed beer ratings with *multiple linear regression*, achieving an R-squared value of 0.658.
- Highlighted the ability to capture user preferences and enhance user satisfaction through tailored recommendations.

### Consumer Sentiment Analysis - Flipkart Product Review Analysis

02/2024 – 04/2024

Analyzed Flipkart product reviews to extract consumer sentiment trends and key concerns. Key components included:

- NLP: Preprocessed data and applied text processing techniques such as *TF-IDF* to extract sentiment-related features.
  - Sentiment Analysis: Implemented a *Random Forest* model to classify consumer sentiments, combined with *t-SNE* for visualization to explore sentiment distribution.
  - Data Visualization: Utilized tools like *Matplotlib* and *Seaborn* to present the analysis results clearly.
- Identified key consumer concerns on the Flipkart platform, such as product quality, pricing, and related issues. Delivered a comprehensive visualization report showcasing sentiment distribution across different product categories, helping businesses optimize marketing strategies and improve customer satisfaction.

## AWARDS & SKILLS

### Awards

- International Student Scholarship (Top 18%) 2024 Fall, 2023 Fall, 2022 Spring
- International Student Scholarship (Top 6%) 2021 Fall

### Skills

- Languages:** English (IELTS 6.5), Korean (Topik 6), Mandarin Chinese (Native)
- Technical Skills:** Python > SQL = C > Javascript = R
- Tools:** VS Code, Git, AWS, MySQL, MongoDB, Excel

## EXTRACURRICULAR ACTIVITIES

### Language Exchange Club / President

03/2023 – 12/2023

- Managed club operations, including promotion and recruitment, attracting members interested in language learning.
- Organized diverse activities to enhance language skills and cultural understanding through interactive experiences.