Wanlin Chen

(213) 245-3640 | wanlinch@usc.edu | Los Angeles, CA | https://lanie-chen.github.io/

EDUCATION

University of Southern California | GPA 3.8 — Los Angeles, CA
Master of Science, Spatial Economics and Data Analysis — May 2023
Tianjin University of Technology | GPA 3.9 — Tianjin, China
Bachelor of Science, Business Administration — Jun 2020

EXPERIENCE

Huntington-USC Institute of California & The West — Los Angeles, CA
Research Assistant — Feb 2023 - May 2023

- Created web maps for the historic original Los Angeles Chinatown neighborhood, ensuring precise geospatial alignment through the analysis of standard errors in control points using diverse GIS georeferencing methods, including first-order polynomial, adjust, and projective transformation.
- Applied entity-relationship (ER) modeling techniques to design a database schema captured the complex relationships between different data elements, including properties attributes, homeowner and resident information, and transactions date and prices.
- Optimized the historical land use database by developing SQL scripts with 3NF principles, resulting in improved data integrity and a 20% increase in querying speed.

YueFu Technology Company — Guangzhou, China
Data Analyst Intern — Apr 2021 - Jul 2021

- Designed and executed ETL processes to transform flat files containing unstructured data on over 300,000 food and beverage manufacturing land transactions in Southern China into a normalized database, improving data integrity and reducing redundancy.
- Built and maintained Python scripts to process data and conduct exploratory analysis based on industry classification including emerging and traditional industries, to explore economic opportunities and deliver valuable insights in the industry.
- Collaborated with cross-functional teams to define and prioritize KPIs, and generated dashboards and reports to track business performance and identify areas for improvement.

TJUT Career Service Center — Tianjin, China
Data Science Assistant — Feb 2018 - Jun 2018

- Extracted crucial employer data, including company locations, job descriptions, and salaries, from over 100,000 rows of data using SQL queries, creating accurate job postings increased applicant numbers.
- Employed regression modeling to examine the impact of employment metrics including unemployment rate, average hourly wage, and job growth rate, on student engagement with job postings, devising effective strategies for boosting engagement levels.
- Developed and deployed a robust user feedback system to gather input from students and employers, resulting in a 90% satisfaction rating among users and a 40% increase in platform utilization.

PROJECTS

COVID-19 Effect on Housing Prices in New York City — Aug 2022 - Dec 2022

- Ensured consistency in data values across multiple data sources by aggregating spatial data regarding housing price, demographic information, and socioeconomic conditions at multiple scales.
- Detected spatial autocorrelation and heterogeneity by applying Monte Carlo simulation and the Breusch-Pagan test to the spatial regression models built to uncover the COVID-19 effect on housing prices in New York City, providing valuable insights into how the pandemic impacted housing prices in different areas across the city.
- Executed SQL scripts to perform spatial operations, including a spatial join of over 20,000 housing points with 200 zipcode polygons, to identify housing patterns and demographic characteristics of specific regions.

Policy Effect on Fatal Encounters in New York City — Feb 2022 - May 2022

- Identified data quality issues of spatio-temporal mortality data with focus on fatal encounters statistics by examining the relationships between different data elements, such as race and manner of death.
- Leveraged causal inference algorithms to analyze the treatment effect of the use-of-force policy on the number of fatal encounters events in New York City, providing valuable insights into the policy's impact and potential areas for improvement.
- Created data visualizations illustrating the distribution of fatal encounters in New York City through the implementation of advanced spatial statistics techniques such as Kernel Density and Ripley's K-function.

Consumer Behavior Analysis — Feb 2019 - Jun 2019

- Performed market analysis and compared sustainable marketing strategies of L'Oreal and Shiseido through extensive research, customer interviews, and feature request analysis.
- Utilized advanced statistical models including exponential smoothing, ARIMA to analyze consumer pattern and predict purchase rates, conducted PCA to identify latent variables driving consumer behavior, and employed NLP model to categorize website feedback based on positive and negative sentiment to provide actionable recommendations for marketing.
- Implemented and executed A/B testing to evaluate advertising strategies and optimize critical metrics for increased customer engagement and conversion rates.

SKILLS

- Software: Esri ArcGIS; PostGIS; PostgreSQL; MySQL; MS Access; Microsoft Office Suites; Stata; Tableau
- Programming Language: SQL; Python; R
- Language: English; Chinese (Mandarin and Cantonese)