

Hansen Xu

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EDUCATION

Emory University

Atlanta, GA

Bachelor of Science-Data Science and Mathematics Major, GPA: 3.72/4.0

Aug. 2023 – Dec. 2025

Relevant Courses: Regression Analysis, Machine Learning, Numerical Analysis, Data Science of Text, Statistical Computing-R/Python, Mathematical Probabilities and Statistics, Linear Optimization, Financial Accounting.

University of California-San Diego

San Diego, CA

Bachelor of Science-Applied Mathematics Major

Sept. 2022 - Jun. 2023

Skills: RStudio, Python SQL, Latex, Microsoft Tools, MATLAB, Data Visualization/Modeling, Project Management

RESEARCH PROJECTS

Examining the Effect of Socioeconomic Status on Water Quality in Georgia Communities

Atlanta, Georgia

Science for Georgia-Research Analyst

Jan. 2025 – Present

- Utilized Python (**NumPy/Pandas**) for **data collection** (gathered 30+ SES and water quality indicators, including 3,000+ Georgia water source data points from the Georgia EPD) and **data processing** (removed 10+ irrelevant factors and 80+ missing values across 5 research variables), ensuring a high level of **data cleanliness**.
- Built 5 **logistic regression models** in RStudio to analyze the relationship between SES factors (e.g., employment rate, income level-continuous variables) and water quality metrics (e.g., whether nitrate levels meet standards, whether the water is used with compliance-binary variables), and verified **reliability using p-value tests**.
- Current findings indicate a **significantly positive impact** of rising income on water quality, providing data support for future environmental pollution control policies and residents' home-buying decisions.

Geospatial Analysis of Startups in Atlanta: Insights for Data-Driven Investment Strategy

Atlanta, Georgia

Emory AI Data Lab-Team Lead

Sept. 2024 – Dec. 2024

- Performed **data cleaning** and **classification** on over 2,000 startups across 50+ ZIP code areas in the greater Atlanta region using Python (NumPy/Pandas), **consolidating** 21+ industries into 5 major categories and integrating corresponding SES datasets (10+ factors such as housing prices, and education level).
- Employed Python **GeoPandas in conjunction with Google Maps** to create visual distribution maps, showing metrics cleaned upon and providing clear insights into local business presence and SES conditions.
- Built 5 **logistic regression models** in RStudio to analyze the causation between various SES factors and startup success rates (**binary variable**: whether a startup operated for over three years) across different postal codes.
- Results indicated that Midtown region (ZIP 30308) enjoys a 30% higher-than-average tech startup success rate, due to strong educational resources (e.g., Georgia Tech). In contrast, southern areas with denser populations exhibit fewer startups and lower success rates (below 20%), although Delta's airline hub supports a strong transportation industry. It offers **data-driven investment strategies** for Atlanta government to select startups.

WORK EXPERIENCE

Inspur Communication Information System Co.,Ltd.

Shandong, China

Data Analyst Intern

Jun. 2024 - Aug. 2024

- Risk Analysis:** Conducted analysis on flood risk data in Ulaanbaatar over 10 yrs with Python, built **multiple linear regression models** to simulate probability of summer flood risks, and **validated** results by **null-hypothesis test**.
- Compiled the findings (model outputs and five recommended preventive measures) into an optimized Mongolian weather warning system proposal, which improved the system's **emergency response efficiency by 30%**.

Beijing Racobit Electronic Information Technology Co., Ltd.

Remote-Beijing, China

Data Analyst Intern

Sept. 2023 - Mar. 2024

- Machine Learning-Based Vehicle Risk Rating:** Assisted in developing an automatic vehicle risk rating system by **collecting** 15 leading research articles and 20+ related datasets and **data cleaning** (standardizing units, and chronological order). Optimized factor weighting led to a **2.6% reduction** in accident frequency during the tests.

China Securities of Construction Financial Co., Ltd.

Shandong, China

Data Analyst Intern

Jul. 2023 - Aug. 2023

- Data Extraction & Visualization:** Extracted monthly bonds sales data from 13 Shandong branches by **SQL and Excel** and produced 10+ **line/bar charts** in geographic distribution maps, allowing branch manager to identify top-selling products and customer personas across different locations and **set quarterly selling strategies/goals**.

LEADERSHIP & COMMUNITY ENGAGEMENT

Emory QTM Department Student Ambassador, Executive Board Member

Apr. 2024 - Present

- Assisted professors and alumni from the QTM department in organizing 10+ major introduction meetings and career-focused events, providing course and major selection advice to over 50 students.