

Sean Sheng-Tse Ru

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EDUCATION

Georgia Institute of Technology - Atlanta, GA

M.S. in Computer Science (Visual Analytics)

Expected: May 2025

B.S. in Computer Science (Database/Networking Technologies and Artificial Intelligence)

EXPERIENCE

Data Analyst Intern @ Capital One

June 2024 - Aug. 2024

- Developed a Tableau dashboard of metrics, graphs, and tables, enabling internal clients to ***filter and analyze over 2 years of Bankruptcy Complaints data***
- Collaborated with compliance testers, risk management, and business analysts to define output columns and parameters to ***design and develop SQL and Python scripts*** for pulling and filtering Complaints and COAF Account Origination data
- Partnered with software engineers on UI enhancements, documenting dependencies and suggesting improvements to ***streamline the onboarding process of test scripts*** to the internal testing platform for future Data Analysts

Researcher @ The Georgia Tech Visualization Lab

Feb. 2024 - Present

YJVisualization:

- Developing web scraping and crawling scripts using scrapy and OpenAI API to mass gather images and only store data visualizations in PostgreSQL
- Plan to ***integrate FAISS for similarity search*** for quick clustering and retrieval of visualizations, and develop an interactive online application to ***facilitate advanced data exploration and visualization recommendations*** for researchers and students

Charting and Quantifying Visual Complexity

- Developed Visualization Taxonomy/Rubric for labeling the MASSVIS dataset and manually labeled 2000+ visualizations
- Drafted papers on labeling considerations for quantifying visual complexity paper submitted to 2024 IEEE VIS
- ***Submitted an accepted 2024 IEEE VIS poster proposal*** about Quantifying Visual Complexity with R statistical analysis on the variation of chart types' visual complexity ratings

Teaching Assistant @ School of Industrial and Systems Engineering

Aug. 2023 - Present

- ***Supported 400+ students*** in understanding course material, focusing on probability, probability distributions, point estimation, confidence intervals, hypothesis testing, and linear regression
- Held office hours, responded to email, provided assistance and answered questions to support students' understanding of course material and use of statistical software (e.g., R), and achieved a ***90% effectiveness rating*** in the Course Instructor Opinion Survey
- Evaluated and graded exams, homework, and class participation, and created comprehensive answer keys for exams to ensure fair and consistent assessment

Data Science Intern @ Optimized Payments

May 2023 - Aug. 2023

- Took Merchant Advisory Group Course 101 to understand the Financial Transaction and Payment Industry
- Wrote Python Script to extract data from PDF Files using Tabula
- Used Tableau to ***visualize and analyze interchange fees and sales data*** (Data Visualization) for 4 clients
- Performed data mapping in Snowflake and DBeaver, and developed a Python Script to compare data between SQL and Snowflake to find discrepancies in data immigration to Snowflake

Student Assistant @ Data Visualization Lab

Jan. 2022 - May 2023

- Held office hours in the lab at the Georgia Tech Library to assist students and staff on Computer Science-related topics
- ***Hosted workshops*** on Text Analytics, Text Mining, and MySQL, and made a Speech Emotion recognition project

Test Automation Intern @ ID TECH

May 2022 - Aug. 2022

- Performed Regression Testing and wrote BDD test cases and automation test scripts to test web-based, Android, and Windows application products on Ubuntu Linux and Windows environments
- ***Utilized Selenium to write automation test scripts*** to test company websites and portals merged with other automation test scripts in Gerrit and run on Jenkins

SKILLS

Python (Pandas, NumPy, Seaborn, TensorFlow, Plotly, PyTorch, scikit-learn, Tabula), **SQL** (PostgreSQL, MySQL, DBeaver), **R** (ggplot2, quantmod, Janitor, Skimr, Tidyverse, DT), **HTML/CSS**, **JavaScript** (D3.js), **C/C++**, **Java** (JavaFx, Android Studies), **Tableau**, **Snowflake**, **CI/CD** (Git)