JOLIE TRAN

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LANGUAGES AND TECHNOLOGY

- Data: PL/SQL, Python (NumPy, Pandas, GeoPandas, scikit-learn, matplotlib, seaborn), MATLAB, R, Excel
- Web Development: HTML, CSS, JavaScript, LeafletJS, MapboxGL, ChartJS, JSON
- Tools: Visual Studio, QGIS, Tableau

EXPERIENCE

GIS Analyst Washington State Transportation Center (TRAC) Jun 2023 – Present

- Developed a method for automating sidewalk attributes collection from State and City DOT and feed into the sidewalk data in OpenStreetMap (OSM) using PostgreSQL and PostGIS.
- Designed sets of rules in SQL for handling data integration challenges from disparate sources, identifying poorly drawn segments, and generating missing OSM sidewalk networks.
- Tested and fine-tuned queries across multiple neighborhoods in Seattle (WA), achieving an accuracy rate exceeding 90%. Established a baseline for scaling in Portland (OR) and Baltimore (MD).
- Created a web interface with HTML, CSS, JavaScript, and Leaflet for transparent public review, fostering continuous enhancements in sidewalk data precision.

Social Media Research, Intern Humanities Data Science Summer Institute @ UW Jun 2023 – Aug 2023

- Collaborated with a multidisciplinary team to conduct a comprehensive analysis of social media conversations on Twitter, focusing on the influence of historical figures in political movements and historical events.
- Analyzed an extensive dataset of 3 million tweets spanning from 2007 to 2023, applying advanced data processing techniques using Pandas and Dask libraries in Python. This efficient analysis revealed key trends and patterns.
- Implemented a mixed-method research approach, combining quantitative data analysis with qualitative assessment to uncover nuanced patterns and trends in social media conversations.
- Contributed valuable insights and created compelling data visualizations for an ongoing book project led by a professor at UW, enhancing the research and its potential impact.

Undergraduate Research Assistant Laboratory for Auditory Neuroscience and Development Apr 2023 – Present

- Utilized MATLAB and the Hilbert transform to extract the envelope of the speech from EEG data of 7-month-old and 11-month-old infants, with a success rate of 70%.
- Engaged in the pre-processing and artifact removal pipeline, achieving a 25% reduction in data distortion.
- Analyzed chance prediction accuracy and determined whether the observed prediction accuracy exceeded chance.

EDUCATION

B.A. in Geography: Data Science University of Washington Sept 2021 – Mar 2024

- In-major GPA: 4.0. Cumulative GPA: 3.93
- Coursework: Data Structures and Algorithm, Database Management, Machine Learning, Web Development

PROJECTS

Interactive Influenza Disease Map Web GIS Development Coursework Sept 2023 – Dec 2023

- Initiated the data collection and cleaning from reputable sources (CDC, NCHS), created a robust influenza dataset.
- Led a team of five members, optimizing task delegation for efficient project execution.
- Developed an intuitive web map interface with interactive dashboard from JavaScript and CSS that allows users to investigate the influenza weekly and annual statistics on both national and state level with ease.

Database Management Projects Database Management Coursework Sept 2022 – Dec 2022

- Performed basic to advanced SQL queries to analyze a dataset of more than 1,000,000 records.
- Developed a database using pymssql that resulted in a 50% improvement in query performance.
- Manipulated a large semi-structured dataset (80,000+ lines of text) in JSON using NoSQL (AsterixDB) to find insights into the business questions.