Walter Wong

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Education

University of California, San Diego *September 2025 – December 2026*
M.S. in Computer Science

University of California, San Diego *September 2022 – June 2025*
B.S. in Data Science, Minor in Mathematics
Awards and Honors: Provost Honors (Fall 2022, Winter 2023, Spring 2023)

University of Washington *September 2020 - June 2022*
B.S. in Applied and Computational Mathematical Sciences
Awards and Honors: Dean's List (Fall 2020, Spring 2021, Fall 2021, Spring 2022)

Relevant Coursework: Advanced Algorithms and Data Structures, Machine Learning, Recommender Systems, Systems for Scalable Analytics, Deep Learning, Data Management, Data Visualization, Optimization for Data Science

Work Experience

Instructional Assistant - University of California, San Diego *September 2023 – March 2025*
Tutoring students during office hours, answering questions online, designing programming assignments, and managing class infrastructure for the courses "DSC 20: Programming and Data Structures for Data Science" and "DSC 30: Data Structures and Algorithms for Data Science".

Data Science Intern - Resilinc *June 2023 - September 2023*
Responsible for designing and implementing a relational database to knowledge graph data pipeline. Utilized Spark DataFrames and Neo4j's Apache Spark Connector to read data in a relational database format and port to our KG schema design. Wrote queries in Cypher to match results from relational database design.

Personal Projects

Spatial and Temporal Modeling for Climate Emulation *April 2025 - June 2025*
PyTorch, Deep Learning Architecture, Convolutional Neural Networks, Transformers, LSTM
Performed data processing, analysis, and visualization on spatial and temporal climate data to develop multiple deep learning architectures that leverage CNNs and transformers for accurate climate forecasting.

Congestion Prediction in Chip Design with Walks and Partitioning *September 2024 - March 2025*
PyTorch, Deep Learning Architecture, Graph ML, Analog Chip Design, Chip Congestion
Partnered with Qualcomm industry partners to perform comprehensive data analysis on chip congestion data and built upon the graph machine learning DE-HNN model architecture and graph representation to improve predictions.

Visualizing NBA Scoring Trends *February 2024 - April 2024*
Svelte, D3.js, Javascript, HTML/CSS, Pandas, BeautifulSoup, Front-End Framework, Web Design
Created a website with multiple interactive visualizations on NBA scoring trends using Svelte and D3.js. Applied data scraping and cleaning methods to obtain relevant and sufficient data.

Predicting Flight Prices *January 2024 - April 2024*
Scikit-learn, Tensorflow, XGBoost, Pandas, Matplotlib, Classification
Performed airline flight data analysis and visualization to create predictive linear regression, random forest, XGBoost, and deep learning models in a robust pipeline with data preprocessing, model training, and performance assessment..

Modeling Power Outages *October 2023 – December 2023*
Scikit-learn, Random Forest Regressor, Pandas, Plotly
Performed data cleaning, analysis, and visualization on power outage data to create multiple predictive random forest classification models in an end-to-end pipeline.

Skills

Languages: Python, Java, SQL, CypherQL, JavaScript, HTML/CSS
Frameworks: Spark, Dask, TensorFlow, JUnit, PyTorch
Developer Tools: Git, VS Code, IntelliJ, Tableau
Libraries: Pandas, NumPy, Plotly, Matplotlib, Scikit-learn, Seaborn, D3.js, Scipy, Keras
Cloud Platforms: AWS EC2, Google Cloud (GCP)