Peter Shamoun
petershamoun.com | www.linkedin.com/in/peter-shamoun | petershamoun80@gmail.com

Education

University of California, San Diego — San Diego, CA
Bachelor of Science in Data Science — *Expected: June 2026*

Relevant Coursework:

Data Structures and Algorithms, Probabilistic Machine Learning, Natrual Language Processing, Data Management, Practice and Application of Data Science, Statistical Modeling, Data Visulization

Experience

Undergraduate Researcher — Sep. 2024 – Present
Data Science Alliance — *San Diego, CA*

- Leading a project to determine optimal food bank locations throughout San Diego using Arc GIS, Python, and predictive modeling, providing policymakers with data-driven insights to inform decisions on food bank placement.

Data Analyst Intern — June 2024 - Sep. 2024
Nexon America — *Los Angeles, CA*

- Led the development of a **Lifetime Value analysis system** for **MapleStory** players using **Snowflake SQL** and **Tableau**, enabling data-driven marketing and game development decisions.
- Collaborated with the **Data Science team** to develop **player classification models**, segmenting users based on behavioral patterns and monetization potential for cohort analysis.
- Built **interactive Tableau dashboards** to visualize player behavior and **campaign performance metrics**, streamlining decision-making for marketing teams.

Research Assistant — Jan. 2024 - June 2024
San Diego Supercomputer Center — *San Diego, CA*

- Developed a deep learning model using **TensorFlow** to efficiently compress matrix values from high-dimensional **plasma physics simulations**, enhancing computational efficiency.
- Designed, implemented, and optimized **sequential neural networks** to estimate matrix elements from input parameter tuples, balancing model accuracy and computational cost.
- Generated **comprehensive reports** and **data visualizations** with **Matplotlib and Plotly** to effectively communicate model performance, error rates, and research insights to the team.

Projects

Cheat Sheet AI | *Python, Natural Language Processing, React.js, Flask, Oracle Cloud* — Dec. 2024 – Present

- Developed an **AI-powered study tool** that generates personalized cheat sheets based on students' course materials, improving learning efficiency.
- Designed and deployed a **Flask-based backend** on **Oracle Cloud**, efficiently handling user requests and enabling seamless integration with the **React.js** frontend.
- Implemented **advanced Natural Language Processing** techniques and **prompt engineering** strategies to generate structured, high-quality study materials.

Graph Theory | *React js, D3 js, HTML/CSS* — Dec. 2024

- Developed an **interactive web application** with **D3.js** to visualize graph theory algorithms, enhancing intuitive learning through real-time algorithm animations.
- Implemented key algorithms including **Breadth-First Search (BFS)**, **Depth-First Search (DFS)**, and **Dijkstra's Algorithm**, allowing users to observe their execution on custom graphs.
- The website is currently used as a tool in **UCSD's DSC40b course** to aid instructors

Technical Skills

Languages: Python, SQL, Java, R, MATLAB, JavaScript
Certifications: Machine Learning Specialization by DeepLearning.AI and Stanford University
Tools: Snowflake, Amazon AWS, Docker, Microsoft Office, Tableau, Github
Libraries/Frameworks: Pandas, React, TensorFlow, scikit-learn, D3.js, Flask