GUANG HUA

+12064993937 | wymnzdblwlm@gmail.com | Seattle, WA, USA | linkedin.com/in/guang-hua-696372268/

EDUCATION

University of Washington **September 2023 - March 2025**
Master's, Applied Mathematics *GPA: 3.81*

- Machine Learning/Deep Learning, Neural Network, Dynamical System

University of Washington **September 2019 - June 2023**
Bachelor's, Mathematics *GPA: 3.59*

- Optimization, Algorithms, Analysis, Modeling, Proof/Logic, Mathematics

PROFESSIONAL EXPERIENCE

DeFiner Labs **Remote, USA**
Data Analyst Intern *January 2024 - March 2024*

- Extracted data from the crypto exchange database using **SQL** and utilized Dune for **data visualization** in plot/graph format. Analyzed user and exchange activity on a daily/weekly/monthly basis to identify the top 15 most active addresses and monitor cash flow monthly.
- Collaborated within a team to **optimize SQL code**, improve performance, remove redundant code and errors, achieving a **30% enhancement in query and analysis speed**.
- Improved **algorithm** for filtering transactions between main accounts, resolved a bug related to handling transactions, optimized logic using inclusion/exclusion methods, and **decreased SQL query time by 10-20%** based on the source dataset.

Self-Employed **Seattle, WA, USA**
Web Developer & Designer *June 2024 - Present*

- Improved user engagement by creating interactive **JavaScript** modules to enhance interactivity on websites.
- Enhanced website aesthetics and user experience by optimizing layout and styling with **CSS**.
- Gain experience in **Web UI/UX design**.
- https://www.guang-analog.blog/

PROJECTS & OUTSIDE EXPERIENCE

Generated Vortex Visualization **Seattle, WA, USA**
Core Member *November 2023 - December 2023*

- **Extended 2D pseudo-spectral code** to solve the vorticity conservation equation with random initial conditions, large-scale vortices formation due to inverse energy cascade.
- Utilized **Python** code to compute dynamics using RK-TVD method and inverse FFT, achieving high accuracy L2-norm error at **1e-15** level compared to the theoretical Taylor Green vortex equation.
- Achieved a perfect score of 100/100 for the group presentation, distinguishing from 8 competing groups.

AMD RDNA2 GPU Efficiency Model and Analysis **Seattle, WA, USA**
Team Leader *July 2022 - August 2022*

- Developed a **mathematical model** to predict the relationship between power consumption and performance of RX6600XT using **polynomial** and **linear fitting**, achieving **excellent matching** with empirical data.
- **Led a team** in extending the efficiency model to cover the entire RDNA2 GPU family, considering CU size, frequency, and voltage draw, enhancing the model's scope and applicability.
- Achieved a grade of **96/100** for the project, **demonstrating excellence in research and analysis**.

SKILLS

Skills: Python, MATLAB, C++, HTML/CSS, Java, SQL

Dev Tools: VS Code, MATLAB, MS Suite, G suite

Languages: Chinese, Japanese, English