ZHIHENG WANG

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EDUCATION

New York University New York, NY
The Courant Institute of Mathematical Science
Master of Science in Scientific Computing (GPA 3.61/4.0) (expected May 2024)

- *Completed Coursework:* Numerical Methods, Fundamental Algorithms, Probability and Statistics for Data Science, Computer Graphics, Programming Languages
- *Current Coursework:* Realtime and Big Data Analytics, DevOps and Agile Methodologies, GPUs: Architecture & Programming Recitation

University of Science and Technology of China Hefei, China
Bachelor of Science in Applied Mathematics (Sep 2017 - Jul 2021)

- *Coursework:* probability, statistics, numerical analysis, math modeling, data structure and algorithms
- *Awards:* Guanghua Scholarship (2018); Excellent Student Award (2019); Yangya Scholarship for Female Students (2020)

COMPUTER SKILLS

Programming Languages: Python, C/C++, SQL, HTML/CSS, Javascript, Matlab
Tools and Frameworks: Git, GitHub, Linux, MySQL, Andriod Studio, AWS, PyTorch, Flask, Django

EXPERIENCES

Department of Computer Science NYU New York, NY
Grader of Programming Languages (Sep 2023 - present)

- Provide valuable support as a Graduate Teaching Assistant for a graduate-level Computer Science course: Programming Languages.
- Assist in grading class assignments and assessments, ensuring timely and fair evaluation of students' work in programming and write-up tasks.

School of Mathematical Sciences USTC Hefei, China
Researching Assistant (Dec 2020 - May 2021)

- Apply knowledge about partial differential equations to research about Carleman estimate and the conditional stability of time-reversal for a quantitative thermo-acoustic system in inhomogeneous media, which has practical application in physics and medical science.
- completed Undergraduate Thesis: Conditional stability of time-reversal for a quantitative thermo-acoustic system in inhomogeneous media.

University of Science and Technology of China Hefei, China
Teaching Assistant of Function of Complex Variables (Sep 2019 - Dec 2019)

- Communicated complex concepts simply to students individually and in groups; used listening skills and patience to guide them to solve homework problems.
- Reviewed students' homework thoroughly and provided detailed comments.

PROJECTS

Weather Forecast API web app (**Python/Flask/Plotly**)

- Developed a weather forecast API web app using **Flask** and **Python**, providing real-time weather information to users. Utilized Flask, a micro web framework, to create the backend of the application, handling API requests and responses.
- Implemented Python scripts to fetch weather data from external APIs (e.g., OpenWeatherMap) and parse the JSON responses.
- Utilize **plotly** to visualize the analysis of weather data.

Running USTC 2018 Web Page Development (**HTML/CSS/Javascript**)

- Designed and developed a user-friendly web page for the Running USTC 2018 event (an event held by a vllunteer club) using **HTML/CSS**, providing an engaging and interactive experience for participants and gaining **100%** positive feedback.
- Implemented the game mechanics, password validation, and clue retrieval system using **JavaScript** and MD5 encryption techniques.
- Link: https://github.com/ChizhiWang/zqs-dldfx

DVD Rental Optimization Project (**Python/PyTorch**)

- Conducted a **Math Modeling** project focused on optimizing DVD rental distribution and maximizing customer satisfaction for a website with **100,000** members.
- Developed mathematical models to determine the optimal number of DVDs to purchase and distribute based on member preferences and rental frequency.
- Utilized Google's **OR-Tools** and **CP-SAT** constraint solving toolkit to develop a solution that efficiently allocated DVDs based on member preferences and rental frequency.

Interactive 2D Graphics Editor (**C++**)

- Designed and implemented a user-friendly interface for drawing and editing graphics in a 2D environment.
- Integrated Eigen library to perform efficient vector and matrix operations for shape manipulation.
- Utilized **SDL2** to handle input events, providing a seamless user experience.