Ruitao Wu Software Engineer • San Diego

Objective: Graduate student in Computer Science with a solid foundation in software design, development, and testing. Interested in leveraging a comprehensive educational background and strong analytical, technical, and programming skills to excel as an entry-level software engineer.

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Education

San Diego State University — San Diego, CA
M.S. Computer Science, — May 2024 – Dec 2024

California State University, Northridge — Northridge, CA
B.S. Computer Science, — Aug 2019 – May 2022

Relevant Experience

The SysteMs And InteLligEnce (SMILE) Laboratory — San Diego, CA
Software Engineer — Jan 2023 – Jun 2024

- Employ best coding practices and object-oriented programming techniques such as abstraction and association to work on robotics software development projects.
- Work as a part of a 5-member team to release and update ROS applications for educators and researcher in simulator subject regards robots
- Decreased software testing time by 30% by developing automated test scripts to load customized test case
- Utilize Python, ROS, Gazebo, and mathematical analysis principles in developing software for the target application.
- Collaborate closely with interdisciplinary teams to develop a simulator that meets engineering and operational performance specifications and to design the overall system.
- Develop software test procedures and programs, create related documentation, and use modeling tools and equipment to gather operating data, conduct experimental tests, and analyze results. Participate in peer reviews and identify, track, and resolve defects.
- Defining epics and user stories based on direct technical discussion with application users

The Autonomy Research Center for STEAHM (ARCS) — Northridge, CA
Software Engineer — Jan 2021 - May 2022

- Developed and maintained responsive web applications using HTML, CSS, JavaScript, and Vue.js, improving site performance%
- Develop include designing, implementing, unit testing, and integrating Java based software
- Collaborated with designers to implement new user interface features, enhancing user experience across multiple platforms
- Refactored website code to enhance readability and maintainability, resulting in a 15% reduction in load times and a 20% decrease in bug reports.
- Conducted thorough testing and debugging to ensure cross-browser compatibility and accessibility compliance
- Developed user interface components and responsive web pages for a web app, resulting increase in overall user activity and a boost in mobile user retention.

Project

Peer-to-Peer Video Website — Northridge, CA
Full-stack Engineer — Jan 2023 - May 2023

- Design frontend interfaces with ReactJS to deliver a seamless user experience across devices.
- Implement back-end services with Python/JavaScript to ensure scalable and efficient video processing.
- Optimize MySQL databases to maintain high performance and effective data handling.
- Implement security protocols with role-based access to protect user data and ensure system integrity.

- Build REST APIs to enable smooth communication between client-side and server-side.

Publications & Presentations

- Haomeng Zhang, Baoqian Wang, **Ruitao Wu**, Junfei Xie, Yan Wan, Shengli Fu, and Kejie Lu, Exploring Networked Airborne Computing: A Comprehensive Approach with Advanced Simulator and Hardware Testbed https://doi.org/10.1142/S2301385024420056
- **R. Wu**, et al. "Real-time Vehicle Detection System for Intelligent Transportation using Machine Learning,"doi: 10.1109/IGESSC55810.2022.9955329.
- IEEE Green Energy and Smart Systems Conference, LONG BEACH, CA,   2022
- IEEE Green Energy and Smart Systems Conference–Student Poster Competition Session   2022
- CSU, Northridge's Autonomy Research Center for STEAHM poster presentation at JPL   2022

Skills

- **Essential Skills:** Problem-solving, Teamwork, Attention to Detail, Agile, DevOps
- **Programming Languages:** Java, C#, Python, JavaScript, SQL, HTML/CSS, C/C++
- **Development Tools:** Git, Docker, Visual Studio Code, Eclipse
- **Frameworks/Libraries:** React, Angular, Node.js, Express.js, Bootstrap, PyTorch, TensorFlow, NumPy
- **Databases:** MySQL, MongoDB, PostgreSQL, Redis