

SONGYU WANG

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SUMMARY

Software Test Engineer (Quality Assurance Specialist) with six years of experience developing and executing end-to-end(E2E) test strategies in highly regulated industries. Skilled in both manual and automated testing, with a strong ability to design and maintain test frameworks and CI/CD(continuous integration and continuous delivery or deployment) pipelines that integrate seamlessly into SCRUM/Agile environments. Adept at managing complex testing processes, emphasizing traceability, defect management, and functional testing. Consistently delivers reliable, high-quality software by driving rigorous testing and quality assurance practices.

EXPERIENCE

Jun 2020 - Present

Benchling

San Francisco, CA

Software Engineer, Quality

- Contributing to various company-wide quality initiatives for a cloud-based software company that develops software platforms powering breakthrough research on biotherapeutics, biofuels, and biomaterials
- Enhancing test infrastructure by developing and maintaining unit and E2E test frameworks using TypeScript (Cypress and Playwright), Python, and Bazel
- Developing and managing multiple CI/CD pipelines for a 300-person engineering organization, utilizing a range of tools including AWS, Terraform, Buildkite, Webpack, Datadog, Sumologic, and Docker
- Supporting TechOps (Technical Operations) by creating and analyzing observability dashboards for system health and cost governance, leading to resource allocation recommendations worth close to a million dollars annually
- Increased E2E automated testing coverage by 30% across multiple teams and components with Cypress, and collaborated on the development of over 300 new E2E test cases
- Improved testing processes for tech stacks including React, Flask, GraphQL, SQLAlchemy, PostgreSQL, and OpenSearch by creating SOP(standard operating procedure)s for test case management and designing a Jira/Xray integrated test traceability system
- Facilitated onboarding and mentored new Quality Engineering (QE) team members

Jul 2018 - Apr 2020

HeartFlow, Inc

Redwood City, CA

Software Engineer in Test

- Led quality assurance and testing for platform and service components in a SCRUM/Agile environment at a medical technology company specializing in software for 3D coronary artery modeling
- Contributed to the development and verification of multiple projects, including three web applications, three backend/API services, and four workflow/product-related components
- Enhanced the stability and efficiency of legacy test frameworks, enabling continuous delivery of new features and improvements in newer frameworks

- Developed and maintained internal tools to streamline development and verification processes
- Developed and performed manual and automated tests using Python and JavaScript to validate and refine product requirements, ensuring accuracy during implementation
- Identified and managed hundreds of defects and bugs, driving resolutions to enhance product quality
- Conducted comprehensive verification and validation activities, including test plan development, result analysis, and report writing. Collaborated with cross-functional teams to perform functional, regression, and system-level testing, ensuring all documentation complied with corporate and federal standards
- Prepared detailed Test/Risk Traceability Reports, documenting test execution outcomes and linking each product requirement and risk to the appropriate tests

Additional Experience

- Teaching Assistant (Mar 2017 - May 2018) - Rose-Hulman Institute of Technology
- Software Engineer in Test, Intern (May 2017 - Aug 2017) - HeartFlow, Inc
- Software Intern (Feb 2017 - May 2017) - Rose-Hulman Ventures

EDUCATION & CERTIFICATIONS

University of Ottawa (2021 - 2023)

Ottawa, ON

*Master of Computer Science, Voluntary withdrawal due to non-academic life events
(Completed 18/30 course units all with A+ grades)*

Rose-Hulman Institute of Technology (2014 - 2018)

Terre Haute, IN

*Bachelor of Science, Computer Science and Software Engineering
3.73/4.00*

GPA:

ISTQB(International Software Testing Qualifications Board) | Certified Tester AI Testing (2024)

AWS | AWS Well-Architected Best Practices & Architecting on AWS with AWS Jam (2024)

Scrum.org | Professional Scrum Product Owner I (2019) & Professional Scrum Master I (2018)

Triplebyte | Generalist Software Engineering (2019)