

Elizabeth Christman

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EDUCATION

Virginia Tech
M.S Computer Science

Blacksburg, VA
May 2023

Texas A&M University
B.S Computer Science, Cum Laude

College Station, TX
May 2021

WORK EXPERIENCE

Software Developer

June 2023 - present

Leidos

- Developed, tested, and maintained sonar simulation software in C++ and Python, ensuring accuracy and high performance in real-time applications
- Enhanced core simulation capabilities by implementing and integrating new sonar propagation models and algorithms, providing the ability to run high fidelity simulations for the customer
- Applied static analysis tools such as CPPCheck and Klocwork to improve code quality and security, reducing vulnerability reports by 95% and ensuring compliance with government and industry standards
- Utilized CI/CD pipelines in GitLab to automate the integration, testing, and deployment processes, reducing the amount of manual intervention needed and increasing the quality of delivered code
- Collaborated with and supported cross-functional teams to ensure deliverables met technical specifications and testing benchmarks across multiple projects

Graduate Teaching Assistant

Fall 2021, Fall 2022

Virginia Tech

- Assisted in instruction of undergraduate computer science courses in data structures, algorithms, and introductory programming based in Java, supporting 60+ students per semester
- Conducted weekly lab sessions and office hours, providing one-on-one support to students and enhancing understanding of course material
- Graded weekly homework assignments and projects, ensuring consistency and accuracy in grading rubrics while providing constructive feedback to support student improvement

Software Engineering Intern

May 2022 - August 2022

Splunk

- Developed a Python-based automation tool to optimize the build process for the Splunk App for Stream, reducing build time by 90% and enabling faster deployment cycles for new updates
- Contributed to a collaborative Agile environment, participating in daily stand-ups and sprint planning to align development efforts with project goals
- Ensured product reliability and maintainability through thorough detailed documentation and integration planning

TECHNICAL SKILLS

Programming Languages: C++, Python, JavaScript, HTML/CSS, SQL

Technologies & Tools: Git, GitLab CI/CD, Linux, Docker, Jupyter, Kubernetes

Frameworks & Libraries: Boost, React, scikit-learn, NumPy, pandas, PyTorch, REST APIs

PROJECTS

2D Jupyter: Exploring Space to Think in Computational Notebooks

- Designed and developed a JavaScript-based extension for Jupyter Notebooks, enabling multi-column layouts and freeform cell arrangements to enhance usability and streamline data analytics workflows
- Developed user study protocols, conducted interviews, and led usability tests with 20 participants, gathering actionable feedback to evaluate and improve product usability
- Analyzed qualitative and quantitative data to identify key user preferences and pain points, implementing design improvements to optimize the overall user experience
- Co-authored two peer-reviewed conference papers presenting the benefits of two-dimensional computational notebooks and contributing valuable insights into user behavior