Sage DuRivage
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SUMMARY

Computational mathematician with experience developing, testing, debugging, and documenting software for automated and hardware-adjacent systems. Currently a technician supporting industrial automation tools, troubleshooting software and hardware issues, performing testing, and maintaining technical documentation. Conduct contract research evaluating large language models' mathematical reasoning and proof-generation capabilities across multiple domains, with additional experience tutoring mathematics & computer science and working with 3D modeling tools for system visualization in equipment-focused environments.

SKILLS

Programming Languages: C++, Python, G-Code, JavaScript, HTML, CSS
Systems & Software: Linux (system administration, shell scripting), Git, CI/CD, Vim, VS Code
Automation & CAD Tools: CNC equipment, 3D printers, laser cutters, Blender, Fusion 360
Software Practices: Debugging, unit and functional testing, documentation, requirements analysis

PROFESSIONAL EXPERIENCE

Academy of Art University; *San Francisco, CA*
Technician, Automated Systems; *Sep 2025 - Present*
• Support automated fabrication and computing systems, including CNC machines, laser cutters, and 3D printers, by troubleshooting software, hardware, and control-related issues.
• Perform software installation, configuration, upgrades, and testing across Windows and macOS environments.
• Assist users with technical issues, clarify requirements, and document system procedures and troubleshooting steps.

Handshake AI Solutions; *Remote*
Model Validation Fellow (Contract); *Jul 2025 - Present*
• Evaluate large language models for mathematical reasoning and proof construction in the domains of calculus, linear algebra, combinatorics, discrete maths, and statistics.
• Perform structured testing, prompt analysis, and failure-mode identification to assess model reliability.
• Document evaluation results and collaborate with researchers to support iterative model refinement.

TEACHING & ACADEMIC ENGAGEMENT

Paper Education; *Remote*
Computer Science Tutor; *Jan 2022 - Present*
• Provide instruction in programming fundamentals and problem-solving for high school students in C++, Python, and JavaScript, and teach systematic debugging techniques using tools such as GDB and Valgrind.
• Review and debug student code, reinforcing best practices in software structure, testing, and error analysis.

University of California, Davis; *Davis, CA*
CAD Software Instructor (Part-Time); *Sep 2022 - Present*
• Teach 3D modeling and prototyping concepts using Blender, including mesh construction, optimization, and rendering workflows.
• Prepare digital models for fabrication, supporting slicing, printer setup, and troubleshooting during production.

EDUCATION

University of California, Riverside; *Riverside, CA*
B.S. in Applied Mathematics with a Concentration in Computational Mathematics
Relevant Coursework: Artificial Intelligence; Data Structures and Algorithms; Software Construction; Automata and Formal Languages; Computer Graphics; Numerical Analysis; Differential Equations; Linear Algebra; Probability