Sage DuRivage

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WORK EXPERIENCE

AI Lab (Confidential / NDA)   Remote
Model Validation Expert – Math Fellow (Contract)   *July 2025 - Present*
- Performed data labeling, and curation to support development and validation of advanced AI/ML models.
- Applied mathematical expertise to ensure accuracy, consistency, and quality in model training datasets.
- Conducted validation checks and applied domain-specific criteria to improve model reliability.
- Collaborated with research and engineering teams under NDA compliance to refine labeling guidelines.
- Contributed to iterative testing and evaluation cycles, providing feedback to optimize data pipelines.

Paper Education Co.   Remote
Computer Science Tutor   *January 2022 - Present*
- Supported more than 120 students in understanding programming concepts by hosting code reviews and providing technical feedback.
- Enhanced code reliability in C++, Python, and Javascript, resolving an average of 10 programming errors per KLOC by coaching trainee developers on SOP's for maintainable and scalable code.
- Optimized org.-standard troubleshooting practices, reducing time spent debugging by 15+ minutes per session by teaching students how to use GNU Debugger and Valgrind to analyze program execution.

University of California at Davis   Davis, CA
3D Software Instructor   *September 2022 - June 2023*
- Introduced 3D modeling and prototyping techniques using Blender, by delivering step-by-step tutorials and providing hands-on guidance to students.
- Enhanced students' rendering proficiency, reducing modeling errors by 15% through best practices in mesh faceting resolution, retopology, and graphical debugging.

PROJECTS

Ray Tracer   •   Personal Project   *February 2025*
- Implemented rendering techniques, including Lambertian shading, specular highlights, anti-aliasing, and ray-object intersection for spheres and planes.
- Tested and deployed the project in a Linux-based environment with g++ 11.4.0, ensuring compatibility with essential libraries; libpng, libstdc++, libm, and libz.

Eight Puzzle Solver   •   Personal Project   *November 2024*
- Implemented an A* search algorithm* in C++ with Misplaced Tile and Euclidean Distance heuristics to efficiently solve the Eight Puzzle.

Itinero Travel App   •   Team Project   *February 2024*
- Built a trip scheduling web app using React.js and Cohere's natural language processing to interpret user queries, with a reusable JSX component to filter, sort, and display geographically-relevant information from Booking.com, Airbnb, and Google Maps APIs.

EDUCATION

University of California   Riverside, CA
Bachelor of Science in Mathematics, Concentration in Computational Mathematics

Technical Skills: C++ (6 years), GIT (2 years).

Relevant Coursework: Artificial Intelligence, Data Structures & Algorithms, Software Construction, Automata & Formal Languages, Computer Graphics, Game Theory, Numerical Analysis, Ordinary & Partial Differential Equations, Multivariable Calculus, Linear Algebra, Discrete Structures, Optimization.