Stephanie Martins

martins.s1234@gmail.com | +1 801-473-0523

github | linkedin

Education

Master of Computing - Graphics — **Aug 2024 - Apr 2026**

University of Utah — *Salt Lake City, UT*

Bachelor of Computer Science - Animation — **Aug 2015 - Apr 2022**

Brigham Young University — *Provo, UT*

Skills

Programming Languages C++ | GLSL | Python | MEL | JavaScript | Java | VEX

Technologies and Software USD | Houdini | Maya | OpenGL | Blender | RenderMan | Linux | Unix | PySide/PyQT

Experience

Nickelodeon Animation Studios — **Jan 2023 - Present**

Technical Director

Avatar: Seven Havens*, *Baby Shark's Big Movie*, *The Casagrandes Movie

- Develop tools in Python and Javascript to automate time-consuming tasks in Photoshop, Harmony, and Storyboard Pro, reducing time required by up to 90%.
- Collaborate with production management staff and artists to build and develop workflows that are efficient and intuitive for Design, Animation, Compositing, and Editorial teams.
- Integrate and transform existing tools from other departments and shows to fit the needs of our production, allowing solutions to be implemented quickly.
- Design and maintain ShotGrid pages to track progress through all stages of production for thousands of assets and shots.

Monsters Aliens Robots Zombies — **May 2022 - Dec 2022**

Pipeline Technical Director

- Maintained and developed the studio's Houdini pipeline, being responsible for 85% of commits to the Houdini pipeline repository.
- Collaborated with department leads, supervisors, and artists to create a new production pipeline, including Maya and Houdini tools and UIs written in Python.
- Solved show-stopping production issues and bugs quickly and efficiently.
- Developed, tested, and performed code reviews for Python code in GitHub, ensuring all code adhered to studio standards and guidelines.

Brigham Young University — **Feb 2021 - May 2022**

Pipeline Technical Director

- Independently developed and maintained tools for Maya, Houdini, and Substance Painter to improve artists' workflow and manage over 100 production assets.
- Incorporated USD technology and functionality into a full production pipeline using the USD Python API and Houdini Solaris.
- Automated the process of assembling USD assets, including variants in model and material, with a Python script, completely eliminating the need for artists to do so manually.
- Provided technical support for over 30 artists interacting with our production software and pipeline tools.

Publications

- Scott Milner, **Stephanie Martins**, Conner Murray, Zachary Wood, and Craig Van Dyke. 2025. "Implementing USD: A Case Study in Incremental Adoption." *In Proceedings of the Special Interest Group on Computer Graphics and Interactive Techniques Conference Educators Forum (SIGGRAPH Educators Forum '25)*. Association for Computing Machinery, New York, NY, USA, Article 8, 1–2. https://doi.org/10.1145/3721242.3734008

Notable Projects

Real-Time Fluid Rendering — **Jan 2025 - Apr 2025**

https://github.com/smartins1234/screen-space-fluid-renderer

- Main contributor on a project implementing real-time rendering of cached fluid simulations. Achieved by generating a depth-map of the particle data, then applying a narrow-range filter to refine the desired surface shape.
- Used OpenGL and GLSL shaders to render final surface with realistic reflections, refractions, and shadows while maintaining interactive speeds.
- Synthesized existing research to additionally render caustic lighting using caustics mapping to estimate light ray refraction for each frame of the simulation.