

Stephanie Martins

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 github |  linkedin

EDUCATION

Master of Computing - Graphics

University of Utah

Aug 2024 - Apr 2026

Salt Lake City, UT

Bachelor of Computer Science - Animation

Brigham Young University

Aug 2015 - Apr 2022

Provo, UT

SKILLS

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

Technologies and Software OpenGL | USD | Houdini | Maya | Substance Painter | RenderMan | Linux | Unix

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%.
- Create and maintain detailed documentation for dozens of new and existing tools and scripts used throughout the studio.
- 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.

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 written in Python, as well as UI interfaces.
- Developed, tested, and performed code reviews for Python code in GitHub, ensuring all code adhered to studio standards and guidelines.
- Organized large initiatives, breaking them up into a series of development tasks that achieved the original goal by the determined deadline.
- Solved show-stopping production issues and bugs quickly and efficiently.

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.

NOTABLE PROJECTS

Real-Time Fluid Rendering

Jan 2025 - Apr 2025

- 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.

PUBLICATIONS

- Scott Milner, **Stephanie Martins**, Conner Murray, Zachary Wood, and Craig Van Dyke. 2025. "Implementing USD: A Case Study in Incremental Adoption." *SIGGRAPH Educators Forum '25*. <https://doi.org/10.1145/3721242.3734008>