SCOTT MILNER — TECHNICAL DIRECTOR

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EDUCATION

Masters of Science, begin. Fall 2025

Brigham Young University, Provo, UT
    Graduation May 2025

Bachelor of Science
    Computer Science
        Animation and Games Emphasis
    Minor in Mathematics

GPA 3.94

COURSEWORK

    Algorithm Design & Analysis
    Systems Programming
    Graphics & Image Processing I & II
    Software Engineering I & II
    Animated Film Production I, II, & III
    Scripting for Animation
    Materials & Surfacing
    3D Visual Effects
    Multivariable Calculus
    Differential Equations

ACHIEVEMENTS

Student Accomplice **(Short Film)**
    Student Academy Award Winner
    Student Emmy Award Finalist
    The Rookies Film of the Year Winner

ShrineFlow **(Video Game)**
    The Rookies Game of the Year Finalist

The Witch's Cat **(Short Film)**
    Student Emmy Award Winner
    The Rookies Film of the Year Finalist

BYU Full Tuition Scholarship Recipient

U.S. Department of Education Presidential Scholar

National Merit Scholar

SKILLS

Languages
    Python • C++ • Bash • Java • MEL
    TypeScript • C

Technologies
    USD (Universal Scene Description)
    Git • OpenGL • Qt • Docker • Qemu
    Enterprise Linux (RHEL) • SaltStack

Software
    Houdini • Solaris • RenderMan
    Tractor • Substance Painter • ShotGrid
    Maya • Blender • Unreal Engine

PROJECTS / WORK EXPERIENCE

BYU 2025 Capstone Short Film *Love & Dungeons* **— Research Assistant**
September 2023 – Present
- Wrote OS-agnostic, portable, and extensible Universal Scene Description (USD)-centric film data pipeline framework, used by a team of 50 artists.
- Collaborated with artist team leads to develop tools for 6 different teams.
- Contributed additional features to a widely-used open source Maya tool.
- Architected USD import and export tools to standardize interchange and editing of 3D data between Houdini, Maya, and Unreal Engine softwares.
- Self-learned Python APIs of 5 major animation softwares.

BYU 2025 Capstone Video Game *Skyguard* **— Research Assistant**
September 2023 – Present
- Adapted film data pipeline framework to meet the needs of a video game project.
- Onboarded and educated incoming student developers on existing software, Git and GitHub usage, and development best practices.

BYU 2024 Capstone Short Film *Student Accomplice* **— Pipeline TD**
May 2023 – May 2024
- Enhanced developer quality of life by refactoring code portability, enabling headless DCC launches, and writing documentation.
- Automated crossframe render denoising via Pixar's Tractor API.

BYU 2024 Capstone Video Game *ShrineFlow* **— Pipeline TD**
May 2023 – May 2024
- Adapted film data pipeline framework to meet the needs of a video game project.
- Deployed VM cluster to automatically compile after submissions to version control.

BYU CS Department — Animation Lab and Server Systems Administrator
March 2022 – May 2024
- Automated and documented lab machine disk image install via SaltStack for 90 workstations for both RHEL and Windows 10 with 6 unique hardware configurations.
- Added SSL security and department authentication integration to Pixar's Tractor render farm software with Docker.
- Designed custom high-performance GPU-passthrough Windows VM (Qemu/KVM), yielding 80 OS-agnostic workstations with simplified authentication, administration, and increased network storage speed.
- Deployed new network storage solutions, licensing and version control servers.

BYU 2023 Capstone Short Film *The Witch's Cat* **— Pipeline TD**
September 2022 – May 2023
- Built and deployed containerized render farm blades, increasing render farm CPU core count by 25% and enabling the project to meet submission deadlines.

Church of Jesus Christ of Latter-day Saints — Missionary
October 2019 – November 2021
- Developed proprietary Customer Relationship Management software integrated with the Facebook API to manage leads and contact information from online marketing campaigns.
- Designed a custom Virtual Choir animation system with Blender and Animation Nodes, allowing efficient organization and animation of 50+ video submissions.
- Provided 24/7 technical support to 200+ missionaries across the Upper Midwest.