

# Roland Shum

## Dev Ops Engineer

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### SKILLS

#### Programming Languages

C++ | C | C# | Python | Java | PowerShell | Bash | YAML

#### Tools

Git | SVN | GitHub | AWS | Azure | GitLab | Docker

#### API / Engine

OpenGL | Unity | Vulkan

#### Operating System

Windows | Debian Linux

### ACADEMIC PROJECTS

#### Dev Ops Engineer, Department of Astromaterial Acquisition

08/2020 – 04/2021

Team of 10 - C# | Unity

3D single-player PC voxel adventure game using Unity engine

- Setup Docker container that ran Unity on any given Linux server with the right hardware
- Setup private GitLab server CI/CD with YAML config file to run automated tests on merge requests
- Created an item crafting graphical tool so designers can modify the crafting experience graphically
- Created a bash script that fixes Unity editor bug, changing a 2 minute process to 10 seconds

#### Engine Developer, Arc Apellago

08/2019 – 05/2020

Team of 12 - C++ | Custom Engine

2D single-player PC action platformer; **Published on Steam** ✉

- Automated test systems using AWS to continuously update school SVN from our private git repo
- Setup Azure build system that ensured that have caught 20+ unintended broken pushes
- Wrote ImGui reflection system that automated the burden of programmers writing engine UI code

#### Game Developer, Deltablade2700

01/2019 – 07/2019

Team of 11 - C | Custom Engine

2D local-multiplayer action platformer; Showcased in **PAX2019 + PAX2020**; **Published on Steam**



- Developed scene manager GUI that allowed programmers to change scenes anytime in-game
- Automated task management tool 'Airtable' to email programmers whenever task is updated
- Wrote automated test cases and checklist for visual effects to ensure build quality for milestones

### PROFESSIONAL EXPERIENCE

#### Teaching Assistant for Game Project (GAM2XX), DigiPen

08/2020 – present

- Provided technical mentorship to ~38 Sophomore game teams writing custom C++ engines
- Helped setup CI/CD GitHub systems for 2 teams that automated builds for every push
- Identified 7 common issues in teams, and created 8 slide decks that teaches game designers, artists, programmers, and audio designers on how to mitigate said issues

#### Head Teaching Assistant for Low-Level Programming (CS315), DigiPen

08/2020 – 04/2021

- Wrote Powershell scripts to query Github to pull PR branch of the student's repository for grading
- Maintained GitHub Actions script that has graded 40+ students assignments over two semesters
- Wrote Python scripts that adjusted each GitHub Action to grade assignments appropriately
- Assisted 40+ 3rd year students with implementing memory debuggers in Linux and Windows

EDUCATION

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**B.S Computer Science in Real-Time Interactive Simulation**

08/2018 – 05/2022

DigiPen Institute of Technology, Dean's List (x4)