

Roland Shum

Software Development Engineer

✉ rolandshum95@gmail.com ☎ (425) 301-0156 in linkedin.com/in/wengsangshum/ 📄 rolandshum.carbonmade.com/

SKILLS

Programming Languages

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

Programming Skills

DevOps | Tools | Automation | Games | Azure | AWS | Github

ACADEMIC PROJECTS

Technical Director, Project Cleanser, DigiPen

08/2020 – 04/2021

Team of 10 - C# | Unity 3D

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

- Setup Docker GitLab CI/CD to automate code unit tests that run on every GitLab Merge Request
- Created an item system and its 20+ items for the player to have a greater degree of freedom
- Implemented placing and destroying items, along with UI using event based system
- Created an visual item crafting tool to improve game designers workflow
- Oversaw and scoped the tasks to accommodate short turnaround time with high iteration

Software Engineer, Arc Apellago, DigiPen

08/2019 – 05/2020

Team of 12 - C++ | Custom Engine

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

- Automated test systems using AWS that have caught 20+ unintended broken pushes
- Setup Azure build system that ensured artists and designers would get the latest version of build
- Wrote ImGui reflection system that automated the burden of programmers writing engine UI code

Software Engineer, Deltablade 2700, DigiPen

01/2019 – 07/2019

Team of 11 - C | Custom Engine

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

- Investigated workflow inefficiencies and developed a scene manager tool that improved workflow
- Developed and pushed particle system for over 20+ particle effects for visual feedback
- Designed and implemented UI for options, main menu, and credits

PROFESSIONAL EXPERIENCE

Teaching Assistant for Game Project (GAM2XX), DigiPen

08/2020 – present

- Provided technical mentorship to 30+ Sophomore game teams writing custom C++ engines
- Examined 7 common engineering issues in teams, and created 8 slide decks for issues

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

08/2020 – 04/2021

- Held the Administrator role for the course's GitHub Organization
- Organized students with GitHub Classrooms and taught students how to use Git
- Wrote PowerShell scripts with Github API that automated a 9 hour grading session to 30 minutes
- Assisted 21 students with implementing assignments like writing their own debugger

INDEPENDENT PROJECT

Open Source Contributor, 'Among Us' Proximity Voice Chat Mod

12/2020 – present

Solo - C++ | Unity | DLL | Network | TCP/UDP; **Released on Github** 📄

- Worked with 4 other developers remote to mod the popular 'Among Us' game on PC
- Delivered highly requested radio mod whilst iterating with player feedback constantly

Mobile Game Developer, Blockfall

04/2018 – 07/2018

Team of 2 - C# | Unity | Tools

- Created and published a mobile puzzle game that uses gravity to arrange blocks on Google Store
- Developed an in-house level editor in C# that cut time to develop a level by over 600%

EDUCATION

B.S Computer Science in Real-Time Interactive Simulation

05/2022

DigiPen Institute of Technology | Dean's List (4x)