

Roland Shum

Software Developer

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Skills

Programming Languages

C, C++, C#, Java, Python

Platforms/Engines

Windows, Linux, Nintendo Switch, PS3, Unity

Education

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

DigiPen Institute of Technology

Expected 04/2022

Academic Projects

Software Developer, PianoViz, Team of 2

01/2022 – present

AR/XR Piano Tutorial

- Integrated Mixed Reality Toolkit to facilitate deployment of Unity project to HoloLens
- Wrote a parser that converts Bluetooth data from MIDI piano so that our app use the piano as an input device

Platform Developer, Deltablade 2700, Team of 10

08/2019 – 12/2021

- Wrote a module that consolidates different input devices which simplifies the behavior code developers write
- Interfaced with Nintendo Switch SDK to implement Joy-Con support for module
- Developed a cross-platform input mapper that facilitated rapid development
- Investigated workflow inefficiencies and developed a tool that improved workflow

Technical Lead, Department of Astromaterial Acquisition, Team of 11

08/2020 – 04/2021

- Created a visual item crafting tool for designers so that they can develop and iterate on the crafting experience
- Enabled item experience by creating the database and linking each item to its respective functions

Professional Experience

Senior Teaching Assistant for Game Project (GAM2XX)

08/2020 – 12/2021

- Provided technical mentorship to 40+ (~300 students) game teams writing custom C++ engines

Head Teaching Assistant for Low-Level Programming (CS315)

08/2020 – 04/2021

- Advocated and migrated from using Moodle assignment to Github Classroom so that grading can be automated

Sector Response Force, Section Leader, Singapore Armed Forces

07/2016 – 07/2018

- Led the section by executing high-level orders from Commanders and translating it to smooth ground operations

Software Developer Intern, Neeuro Pte Ltd

03/2015 – 06/2015

- Prototyped 6 games using Unity that trains the brain using the custom in-house hardware 'Senzebend'

Independent Projects

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

12/2020 – 01/2021

C++ (DLL) | Unity; Released on Github [🔗](#)

- Delivered radio mod after engaging with key community members and discovering what they want

Indie Developer, BlockFall

03/2016 – 07/2016

Unity C#, Published on Play Store

- Designed and iterated on 4 puzzle mechanics over 48 levels to create an engaging and fun experience