Bo Wen Zhai

4A Computer Science Student at University of Waterloo

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Skills

Languages:

C++	C
C#	GLSL
Bash	JavaScript
Kotlin	Java
HTML	CSS
Scheme	

Graphics/Game:

Unreal	Unity
OpenGL	DirectX
XDK	Three.js

Web/Mobile:

Node.js	Android Studio
Firebase	Cordova
Spring	Dialogflow
CouchDB	Elasticsearch

Creative:

Photoshop	Illustrator
InDesign	Animate
Figma	Blender
XD	Premiere

Highlights:

- Knowledge of game dev and graphics pipelines
- Crafting experiences using HCI principles
- UI/UX design and implementation

Education

Bachelor of Computer Science,
University of Waterloo
(Expected April 2020)

Employment

Rendering Engineering Intern | Microsoft - The Coalition Studio (Aug. 2018 - Dec. 2018)

- Improved consistency of GPU benchmarking scheme and reduced its runtime by up to 75%
- Implemented shader debugging tool for UE4-based engine, saving 20% of shader memory
- Wrote maintainable and extensible code for the flagship game's rendering pipeline in C++
- Used DirectX profiling tool for Xbox to investigate and fix various rendering bugs

R&D Developer Intern | IFDS (Jan. 2018 - Apr. 2018)

- Built an interactive HoloLens AR data visualization tool using Unity, C# and CouchDB
- Architected and implemented 3D live office map using Spring Boot and Adobe Animate
- Developed local search engine using Node.js that OCRs and indexes files in Elasticsearch
- Built and presented a Google Home financial assistant consisting of a Dialogflow agent, a companion Android Kotlin app with MVC architecture and a Firebase-powered live dashboard

Mobile Developer Intern | SAP (May 2017 - Aug. 2017)

- Integrated new features into SAP's enhanced mobile runtime for web applications
- Developed consent plugin for Cordova in JavaScript that enforced transparency and security
- Developed native Android Java app that achieves CRUD and sync for a CMIS document repo

Software Developer Intern | Veriday (Aug. 2016 - Dec. 2016)

- Designed, built and maintained websites for large scale financial and banking institutes
- Developed Chrome extension for Veriday's CMS that sped up production workflow

Projects

Procedural Terrain Generator (May 2018 - Nov. 2018)

- Developed OpenGL-based terrain generator using C++ and GLSL
- Used Perlin Noise algorithm to procedurally generate block terrain as the player walks
- Implemented first person camera that allows for movement in a 3D environment

Personal Blog (Mar. 2018)

- Designed and developed personal blog to showcase projects and writeups
- Created wireframes and high-fidelity prototypes using Figma prior to implementation
- Achieved modularity using YML data and EJS templates; styled with Three.js and SCSS

Activities

Indie Game Developer | Wanderfall Games (Sept 2017 - May 2018)

- Contributed to the Unity C# narrative game engine codebase
- Designed game interfaces for an interactive mystery adventure game using Adobe suite
- Participated in daily scrum meetings, and set up usability testing though a demo