Xinya **Gao**

☎ (+1) 604-719-6122 | ✉ shinyagao98@gmail.com | 🏠 shinyagao.github.io | ⌨ ShinyaGao | in xinyagao

Skills

Coding Languages	C++/C, Python, JAVA, C#, JavaScript, TypeScript, HTML/CSS
REST and Backend	Docker, Kubernetes, CouchDB, CherryPy, Jinja, AWS, GCP, SQL, Mocha, Chai, JQuery, Jira
Revision Control	Perforce, Git
Graphics/Engines/Art SDKs	Unreal, Unity 3D, OpenGL, GLSL/HLSL, Three.js, Nuke, Maya, Photoshop

Work Experience

DNEG   *Vancouver, Canada*

SOFTWARE DEVELOPER, REALTIME   *Apr. 2023 - Present*

- Collaborating closely with a global team of artists and developers on character building and advanced shader development for a AAA game in partnership with Tencent.
- Developing custom tools and plugins for Unreal Engine, facilitating advanced rendering techniques and improving the workflow for artists in real-time shows.
- Investigating and building new tools to integrate with Unreal Engine 5 to expand its application across the DNEG VFX pipeline.
- Managing and optimizing the Perforce (P4) database for large-scale creative projects, automating processes to improve efficiency and reliability in asset management and permissions for high-profile film and television productions.
- Working with Blueprints and Sequencer to troubleshoot and refine scenes and assets from legacy projects.
- Credited on over a dozen film/television/mixed media projects, including Oppenheimer, Dune: Part2, Godzilla x Kong: The New Empire, etc.

Activision   *Vancouver, Canada*

SOFTWARE DEVELOPER   *Sep. 2021 - Sep. 2022*

- Developed new world-building features, rendering pipelines and tools of IW engine for the Call of Duty series using C++ and Qt GUI.
- Developed full stack crash dump collection service used by multiple studios for both development and live crashes using Cherrypy, JavaScript, CouchDB, Docker and Kubernetes.
- Reported to the VP of Central Tech in Los Angeles, although based in Vancouver.
- Credited on Call of Duty: Vanguard, Call of Duty: Modern Warfare II

University of British Columbia   *Vancouver, Canada*

TEACHING ASSISTANT - CPSC *314*   *Jan. 2021 - Apr. 2021*

- Worked closely with faculty, administrative staff, and students to assist in a third-year Computer Graphics course.
- Held office hours to help students gain a good understanding of 3D math/physics/data Structure/design patterns.
- Performed all assistant teaching duties, including mentoring, lab TAing, piazza handling, and researching.

Projects

Integrated 3D Printing & XR for Pediatric Medicine - *AR/VR, HoloLens, C#, Unity*   *May. 2021 - Aug.2021*

- An XR application exclusive for the Microsoft HoloLens 2 that helps clinicians to inspect and manipulate patient-specific 3D anatomy models.
- Created key features such as the rotation widget tool, position reset, tooltips, overlay simulation and multimedia panel.
- Demo: `https://youtu.be/_EkY6CH5wWI`

The World They Saw - *C++, OpenGL*   *Jan. 2021 - Apr.2021*

- A 2D third-person strategy game where user can customize their weapons and movement algorithm.
- Created from scratch using ECS architecture, with a physics bullet simulation system in a team of 4.
- Features include game physics, particle systems and Mesh deformation based on forces and point of impact.
- GitHub: `https://github.com/ShinyaGao/TheWorldTheySaw`

Simple Ray Tracing Simulator- *C++, OpenGL*   *Nov. 2020 - Dec.2020*

- A ray tracer of triangles, cubes, ray-traced shadows, and Blinn-Phong materials based on Peter Shirley's book with Qt GUI.
- Demo: `https://youtu.be/IpgL8A7h3zw`

Education

University of British Columbia   *Vancouver, Canada*

B.S. IN COMPUTER SCIENCE   *Sep. 2017 - Nov. 2021*