

Daekun Kim

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Skills

- Back-end** Go, PostgreSQL, Redis, Node.js, Express, Python, Java, PHP, REST API
- Front-end** React, TypeScript, JavaScript ES6, HTML5, SASS
- DevOps** AWS, GCP, Docker, Kubernetes
- 3D Graphics** Unity, C#, AFrame, Three.js, AR.js, C++, HLSL, Mixed Reality Toolkit, OpenGL

Work Experience

Promethium

Menlo Park, CA

SOFTWARE ENGINEERING INTERN

Jan. 2021 - Present

- Architected an end-to-end serverless no-code analytics SaaS application using **AWS AppFlow**, **S3**, **Athena**, **QuickSight**, and **Glue** to provide **10x** cheaper solution than competitors.
- Contributed to the internal provisioning of cloud backend using **AWS CloudFormation** and **AWS S3** to achieve a scalable infrastructure.
- Delivered an automated cloud backend architecture using **AWS EC2**, **Lambda**, and **Amazon VPC** with an enterprise-level security.

Scena 360 Co.

Waterloo, ON

CO-FOUNDER & STAFF SOFTWARE ENGINEER

Oct. 2020 - Present

- Co-founded Scena 360, a web-based virtual reality meetup platform offering a more realistic experience for the post-COVID world.
- Developed a websocket server for WebRTC signalling using **Redis** and **Go** and deployed on **Kubernetes** cluster hosted on **GCP**.
- Implemented a 3D peer-to-peer multi-user experience using **TypeScript**, **React**, **WebRTC** and **AFrame** with **near-zero latency**.
- Delivered a UX-optimized web application using **React** and **AFrame** for both desktop and mobile environment.

University of Waterloo Human-Computer Interaction Lab

Waterloo, ON

UNDERGRADUATE RESEARCH ASSISTANT

Sep. 2020 - Present

- Working under Professor Daniel Vogel, Jeremy Hartmann and Johann Wentzel to investigate the effect of depth perception in VR interaction.
- Architected an **ISO-compliant** VR experiment flow using **Unity**, **C#**, and **Steam VR** to ensure the experiment's cross-platform compatibility.
- Built an end-to-end ELT data analysis pipeline using **Python**, **AWS S3**, **PostgreSQL** and **Pandas** to efficiently analyze **12M+** data points.

Spatial Inc.

New York, NY

AR/VR SOFTWARE ENGINEERING INTERN

Apr. 2020 - Aug. 2020

- Integrated **articulated hand tracking** to Spatial's input system to provide over **10K+ Oculus Quest users** a next-generation interaction.
- Constructed a bridge using **Unity** and **C#** to retrofit the existing Microsoft's Mixed Reality Toolkit with Oculus's input system.
- Delivered a new teleportation mechanics for hand tracking, setting an important **UX precedence** in 3D VR interaction.
- Implemented interactable web browser in AR/VR using **C#** and **HLSL shader** to allow live web browsing in collaborative sessions.

Virtro

Vancouver, BC

JUNIOR DEVELOPER

Jul. 2018 - Aug. 2018

- Built a scalable backend for Slack-integrated chatbot using **Node.js**, **Express**, **MySQL**, **AWS EC2** and **REST API** design.
- Ported The Station™ (Sci-Fi FPS Indie Game) from PC to **PSVR**, **Oculus Rift** and **HTC Vive** using **Unity** and **C#**.
- Optimized a VR game to achieve **130%+ increase** in performance (30 FPS → 70+ FPS) using **Unity's** light baking process.

Education

University of Waterloo

Waterloo, ON

CANDIDATE FOR BACHELOR OF SOFTWARE ENGINEERING, HONOURS (CO-OP)

Sep. 2019 - Apr. 2024 (Expected)

- Cumulative Average: 94.1% (4.0 GPA)
- Colonel Hugh Heasley Engineering Scholarship (\$10,000)
- President's Research Award (\$1,500)
- Presidential Scholarship with Distinction (\$2,000)

Extracurricular Activity

UW VR

Waterloo, ON

DIRECTOR OF TECHNOLOGY

Sep. 2020 - Dec. 2020

- Hosted a serverless WebAR workshop for **20+** students using **AFrame**, **HTML5**, and **JavaScript ES6**.
- Researched latest VR/AR industry updates and reflected them in club events.

The Water Boys

Waterloo, ON

VOCALIST

Sep. 2020 - Present

- Performed as Baritone 1 singer as part of lower-voice acapella group.
- Chosen as the term's soloist for "Little League" by Conan Gray.