

Brian (Sangyeong) Kim

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Skills

- Python | C++ | Java | Go | HTML | CSS | Javascript | JQuery | MongoDB | Django | Spring Boot | OpenCV | Git | QT | Heroku |
- Docker | Kubernetes | Heroku | Vercel | AWS | Azure | Microservices | Computer Security | Network-Fundamentals | Cryptography |
- CI/CD | Cloud-Computing | System Development | Software Defined Networking | Web Development | Computer Graphics |

Experience

Research Assistant

SKY PLANE

Berkeley, CA, USA

07.2023 - Today

- Building an inter-cloud object transfer system, optimizing for cost or throughput, advised by Professor Ion Stoica and Joseph E. Gonzalez.
- Collected IP ranges for Microsoft Azure, allowing Skyplane to detect Azure region based on IP address.
- Integrated Skyplane's CLI and Library with **Google Bigquery**, enabling inter and intra cloud data transfers to and from Bigquery.

Software Development Intern

Samsung SDS

Seoul, South Korea

06.2023 - 08.2023

- Worked at Samsung's [Cloud SCM](#) Department. Built a Verification Server which is designed to be hosted on a Virtual Machine.
- Built a lightweight C++ applet, deployed on Kubernetes, that verifies the license of the Cloud SCM Platform.
- Designed/Implemented a troubleshooting tool that checks the Verification Server's status and prints out details of the License.
- Gave a Tech Talk to the Samsung SCM team on deploying Monolithic Platforms to the Cloud.

Software Development Intern

Juniper Networks

Sunnyvale, CA, USA

05.2021 - 08.2021

- Participated in the development of the [Cloud-Native Contrail Networking \(CN2\)](#) platform and Implemented software that visualizes **Kubernetes**, **OpenStack**, or **OpenShift** components on a **Go** web server.
- Designed and implemented automated testing features, allowing users of CN2 to write custom testing protocols in JSON format. The custom tests check against existing components and visualizes missing or malfunctioning components.
- Contributed to the successful launch of CN2 and published a patent, "**Analysis System for Software Defined Architectures (2022, 12)**".

Research Assistant

JIPCAD

Berkeley, CA, USA

09.2020 - Today

- Worked on Developing/Testing a 3D Graphics CAD software with **QT**, **OpenGL**, and **C++** under the supervision of Professor Sequin.
- Developed an **error reporting module** for JIPCAD's graphic generation language by tokenizing code and checking for syntax errors.
- Lead **Dynamic Scenes** development: Built Modules for **Orthogonal and Perspective Displays** under a specified frustum. Added new **Ambient**, **Directional**, and **Cone lighting** features.
- Made the Sharpness and **Catmull-Clark Subdivision** features more robust through in-scene Merging. Allowed users to define **Hierarchical Coloring** of faces.

Head of Engineering

Aware

Seoul, South Korea

08.2021 - 11.2022

- Led the development of a **Financial Commentary and Analysis Web Service Startup**, complete with an article website, subscription service, and email alerts, resulting in **1000+ customer growth** and securing a **\$100,000 investment** from the government.
- Designed and implemented the article website, complete with user registration, post-viewing/editing interface, post recommendations, subscription interface, and an admin management page with **Django** and **MySQL** Database.
- Supported **Continuous Integration** to our web service: [feature proposal -> development -> local testing -> deployment -> monitoring].

Sergeant, Squad Leader

Republic of Korea Army

USAG Humphreys

11.2021 - 05.2023

- Took a **2 year break from university** to serve as a Linguist for the Republic of Korea Army, Combined Forces Command, Signal Unit

Education

B.A. Computer Science, Statistics

University of California Berkeley

Berkeley, CA, USA

Graduating 05.2024

- Technical Upper-Division GPA: 3.74/4.00 | Military Service Gap Year: 2021 ~ 2023

Projects

DIST.AI

HTML/CSS/JS, OpenCV, Flask, Tensorflow.js, MongoDB

06.2021

- Detects people from a video via **YOLO Architecture Neural Network**. Distinguishes lines/groups of people using **MSTs** and **K-Means algorithm**. Generates a **heat map** of the most crowded areas of the video frame.

Awards

- Dean's Honor List (2021)
- Vanderbilt University Hackathon 2nd place, Best Use of Google Cloud Award (2020)
- Ronald Reagan Student Leadership Award (2018)

Patents

ANALYSIS SYSTEM FOR SOFTWARE-DEFINED NETWORK ARCHITECTURES

JNP3631-US

Registered 12.2022