Sangwoo Han

Canadian Citizen | [Website](#) | [GitHub](#) | [LinkedIn](#)

TECHNICAL SKILLS

- Python | Go | JavaScript | Ruby | Flask | React | Express | Ruby on Rails | Postgres | Redis
- Azure | AWS | Docker | Kubernetes | RabbitMQ | Jira | Jenkins | GitHub Actions | Grafana | Elastic Stack

WORK EXPERIENCE

DNEG   May 2022 – Present

Software Developer   Montreal, Canada

- Designed and implemented a REST API for VFX artists/developers so they can upload/view/update models from various Digital Content Creator tools.
- Reduced response time by up to 50% of our Helix API endpoints by implementing a look-aside write-through caching layer with Redis.
- Leveraged database connection pooling to increase our USD service's latency by up to 20%.
- Implemented and integrated unit, integration, and load tests into CI workflow to recently migrated projects, increasing average code coverage from 52% to 73%.

Atelier Paper   May 2021 – September 2021

Software Developer Intern   Seoul, Korea

- Designed and implemented scalable APIs to manage construction prototypes and standardize proprietary file formats from various Computer-Aided Design (CAD) softwares.
- Reduced our CAD metadata service response time to its slowest API/database call by leveraging goroutines, almost doubling the service's throughput.
- Reduced response time by up to 80% of key REST API endpoints by updating database indexes and implementing caching with Redis.
- Identified and addressed SQL injection vulnerabilities in major services.

Atelier Paper   May 2020 – September 2020

Software Developer Intern   Seoul, Korea

- Designed and implemented a Single Page Application client using React.js following an MVVM architecture and secured it against XSS attacks with DOMPurify.
- Built unit tests using Jest and Enzymes before integrating them to CI/CD pipeline.

PROJECTS

[Instant Messaging Social Platform](#) | *Go, PostgreSQL, React.js, Auth0, Socket.IO, Azure*

- Designed and implemented a microservice architecture with a web, chat, notification, and online presence service.
- Containerized services with Docker, deployed with Azure, and integrated CI/CD with GitHub Actions.
- Implemented a single-page application in React.js, added authentification with Auth0, and deployed it with Azure Static Web Apps leveraging global hosting, reducing load time by up to 70%.

[BitTorrent Client](#) | *Python*

- Implemented bencoding and bdecoding algorithms to parse Torrent files.
- Extensively used socket programming to communicate with trackers and peers.
- Leveraged multithreading to concurrently download data from peers, reducing average download time by 95%.

[Live Sign Language Detection](#) | *Python, PyTorch, React.js, Auth0, Socket.IO, Azure*

- Trained a neural network to recognize sign languages using PyTorch.
- Built a single-page application with webcam access with React.js.
- Deployed the application with Cloudflare CDN, reducing load time by up to 63.33%.

EDUCATION

Concordia University   Montreal, Canada

Bachelor in Computer Science and Mathematics   Aug 2018 – May 2022

- GPA: 3.5