

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

- Led the development of Helix API. Managed/prioritized requirements, designed/reviewed architecture, and discussed project roadmap with PM and EM.
- Reduced response time by up to 50% of key Helix API endpoints by implementing a look-aside write-through caching layer with Redis and leveraging database connection pooling with Amazon RDS Proxy.
- Fixed race condition in API throttling service with a modified implementation of Token Bucket, leveraging Redis sorted sets (scoring with timestamps) and the MULTI command to atomically execute Redis commands.
- Implemented the reconciliation service for the payment backend of VFX Assets Marketplace to handle/queue any mismatches between Stripe's payout reconciliation report and our ledger service.

Atelier Paper

May 2021 – September 2021

Software Developer

Seoul, Korea

- Designed and implemented scalable APIs to manage construction prototypes and standardize proprietary file formats from various Computer-Aided Design (CAD) softwares.
- Increase our CAD metadata service throughput by over 100% by leveraging database connection pooling, goroutines to make asynchronous calls to other services, and database indexing.
- Built an asynchronous Python logging handler that reduced latency of our encoding services by up to 15%.

Atelier Paper

May 2020 – September 2020

Software Developer

Seoul, Korea

- Implemented group messaging in our customer support chat service leveraging Socket.IO with a Redis adapter to synchronize the state of connected clients and rooms.
- Build and integrated unit, integration, and load tests into CI workflow to recently migrated projects, increasing average code coverage from 60% to 90%.

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 authentication 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

Bachelor in Computer Science and Mathematics

- GPA: 3.5

Montreal, Canada

Aug 2018 – May 2022