

# Bernard Kim

SOFTWARE DEVELOPER

Lynnwood, WA

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## Education

### University of Washington

B.S. IN COMPUTER SCIENCE AND ENGINEERING

- GPA: 3.44/4.0

*Seattle, WA*

*Jun. 2018*

## Projects

### Showcase

PLATFORM FOR SHARING WEB DEV PROJECTS

[Github](#)

*Jan. 2019 - Mar. 2019*

- Broke down application into separate services.
- Integrated Elasticsearch for a better search performance.
- Enabled communication between services with pub/sub messaging through RabbitMQ.
- Deployed application on a Kubernetes cluster hosted on DigitalOcean.

### LOL Chat

DISCORD CLONE, MESSAGING WEB APPLICATION

[Github](#)

*Nov. 2018 - Dec. 2018*

- Built a simple chat server using Node and Socket.io for realtime communication.
- Implemented voice chat using WebRTC allowing P2P audio communication.
- Deployed a coTURN docker container to relay WebRTC media traffic.

### PTrade

WEB APPLICATION FOR TRADING STOCKS WITH A MOCK PORTFOLIO

[Github](#)

*Jul. 2018 - Oct. 2018*

- Developed a RESTful API in Go to handle user transactions stored in a MySQL database.
- Created scheduled tasks to pull the latest stock market prices from IEX's public API and log user data.
- Front-end built using React and tested using Jest

### KV Store

DISTRIBUTED KEY VALUE STORE

*Mar. 2018 - Jun. 2018*

- Built a highly available, scalable, fault tolerant key-value store using Java.
- Implemented at-most-once RPC semantics to prevent duplication.
- Implemented the multi-Paxos algorithm for state machine replication.
- Partitioned the key set to improve system throughput.

### XK Operating System

UNIX-LIKE OPERATING SYSTEM BUILT ON TOP OF [XV6](#).

*Sep. 2017 - Dec. 2017*

- Implemented I/O system calls (open/close/read/write/...).
- Enabled the operating system to run multiple processes with fork/exec.
- Added a relatively full-featured virtual memory system (LRU swapping, mmap, copy-on-write).

## Skills

### LANGUAGES

- [Java](#) [C](#) [Python](#) [Go](#) [SQL](#) [HTML](#) [CSS](#) [JavaScript/Typescript](#)

### TECHNOLOGIES/Frameworks

- [Node/Express](#) [React](#) [Redux](#) [Docker](#) [Kubernetes](#) [RabbitMQ](#) [Elasticsearch](#) [Redis](#) [MongoDB](#) [MySQL](#)