

# Peijun Ma

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## Skills

### Technology

#### Expert

I am able to onboard new team members with these technologies:  
Scala, Python, Docker, Terraform, Google Cloud Platform, Linux

#### Proficient

I am able to be immediately productive with these technologies:  
Kubernetes, TypeScript, Angular, Java, Jenkins

#### Familiar

I am able to pick up these technologies relatively quickly:  
Haskell, Rust, Vue.js, C#, AWS, C

### Other

- Architecting software systems using domain-driven and service oriented principles
- Developing continuous deployment workflows to Kubernetes in a production environment
- Administrating Unix-like operating systems, have knowledge of the OSI network model
- Writing technical documentation and producing infrastructure diagrams
- Solid understanding of data structures and algorithms
- Knowledgeable in agile (XP, Kanban, and Scrum)

## Experience

### Garner Distributed Workflow

Software engineer | November 2018 – Present

- Practiced **GitOps** for continuous deployment using **ArgoCD**
- Introduced **functional programming**, planned weekly study sessions to onboard team members
- Migrated production environment from systemd services on manually managed VMs to **Kubernetes**
- Developed infrastructure as code project from scratch using **Terraform**
- Optimized DB result parsing to be 2000x faster by reducing the runtime complexity from  $\mathcal{O}(n^3)$  to  $\mathcal{O}(n \log n)$

## Projects

### Personal website

<https://gitlab.otonokizaka.moe/Umi/peijun.dev>

Open Source project

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- Built a personal website using **Vue.js**
- Published the website as a **Docker** image using GitLab CI
- Deployed the website automatically using **GitLab CI**

## Cloudflare DDNS

Open Source project

<https://github.com/MaT1g3R/cloudflare-ddns>

- Purposed Cloudflare's DNS service as dynamic DNS using **Terraform**

## Office hour scheduler

Open Source project

<https://github.com/office-hour-scheduler/ohs>

- Collaborated with several other developers to build a webapp for scheduling office hours with professors
- Designed the backend using **domain-driven** design principles
- Implemented the backend API using **GraphQL**
- Built the artifact as a Docker image in CI

## Option (Python Library)

Open Source project

<https://github.com/MaT1g3R/option>

- Implemented a library to bring Rust-like Optional types to Python
- Integrated automated testing and deployment using Travis CI and codecov
- Published the library automatically to PyPi using the CI pipeline

## Chat bot

Open Source project

<https://github.com/MaT1g3R/YasenBaka>

- Created a chat bot serving 1000+ chat rooms at its peak
- Explored asynchronous programming using the **asyncio** library
- Deployed the application using Docker to **AWS**

## Music player

Open Source project

<https://github.com/MaT1g3R/musicview>

- Designed a music player that discovers the least played songs for the user
- Created a simple UI using ncurses
- Synchronized between different threads using locks and condition variables

## ext2 file system

Course project, University of Toronto

- Implemented a ext2 file system from scratch using C
- Debugged the program using GDB, valgrind, and CLion
- Experimented with the CMake build system

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## Education

**University of Toronto**

September 2016 – April 2021

Bachelor of Science, **Computer Science Specialist**