

# Bee Ellis

## Software Engineer/Site Reliability Engineer

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## EXPERIENCE

### Production Engineer

#### Meta

📅 08/2020 - 06/2023 📍 Seattle, WA

- Played a critical role in identifying and implementing the fixes to blind spots in our org-wide end-to-end testing service
- Led team and org-wide initiatives, including new language learning weeks and better engineering weeks
- Demonstrated self-improver and quick learner, committing code in 5+ languages, including Rust, Python, JavaScript, Go, C++, and Hack (Meta's in house flavor of PHP)
- Took strong ownership of a major tier 0 service, becoming the leading subject-matter expert. Supported this service throughout my time at the company

## PROJECTS

### Automated configuration rebuilding platform

📅 08/2020 - 08/2021

*Redesign of a monolithic Python service that generated configs for a wide variety of teams in my org, including the configs for the I4 load balancer.*

- Reduced capacity requirements from 9 dedicated servers to 15 small containers owned by multiple teams, running in a distributed system.
- New architecture distributed the service cost amongst the teams who owned the configs that were being generated. This saved our team the cost of running other team's config generators.
- Built numerous monitoring dashboards and added tuned automated alerting systems to enable faster issue identification and remediation.

### HTTP/2, HTTP/3, HTTPS, and STUN load generator for org-wide e2e testing

📅 06/2022 - 05/2023

*Rewrite of one of the most important monitoring services in the Traffic org from Python to Rust.*

- Led group of three throughout all phases of development.
- Reduced memory use by 50% and CPU use by 60%, meeting strict limits that were needed to allow it to be deployed to ultra-small-scale clusters.
- Filled a long existing blind spots in this service's deployment. Increasing coverage by more than 200%. This resulted in us being able to identify new and existing production issues throughout the development of this service.
- In order to meet the resource limits, we had to audition a wide variety of HTTP libraries, including a hand-built implementation that used TCP sockets directly. This process was made considerably easier than it could have been because I write modular, readable, and maintainable code.

### Leading subject-matter expert for Rust in my organization

*Early advocate for the adoption of the Rust programming language in my org, which led to me being a well renowned SME.*

- Implemented early proof-of-concept rewrite of a widely used tool that not only provided a material benefit of vastly improving the speed of the tool (reduced run time to <2s in Rust from the 40s+ (and up to 90s) Python run time), but also was cited as being highly influential in proving that Rust was both a viable and performant language to write Traffic tools in.
- Consulted as Rust SME for four other Rust projects in my organization, these ranged from weekly 1:1 meetings to asynchronous Q&As.
- Co-led org-wide Rust language learning week in which I hosted daily office hours where I helped 20+ coworkers get familiar with the Rust programming language.

## SKILLS

Automation Bash Distributed Systems

Docker CI/CD Cloud Infrastructure

End-to-End testing Git/GitHub

GraphQL Haskell Javascript

Kubernetes Linux Microservices

MongoDB Network Debugging

PostgreSQL Python React Ruby

Rust Scaling Software Development

SQL TCP/IP Typescript

Unit Testing

## EDUCATION

### Software engineering boot camp

#### App Academy

📅 07/2019 - 12/2019

### BA with Departmental Honors in Philosophy

#### University of Washington

📅 08/2017 - 03/2019

## ADDITIONAL EXPERIENCE

### Barista

#### Fuel Coffee

📅 09/2017 - 03/2019 📍 Seattle, WA

Small high volume craft coffee shop.

### Lead Barista

#### Woodinville Bagel Bakery

📅 02/2015 - 06/2017 📍 Woodinville, WA

Local bagel bakery and cafe.