# Rafael Bayer

github.com/rafibayer // rafibayer.github.io

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## Experience

### **Microsoft Azure,** Redmond — *Software Engineer*

SEPTEMBER 2021 - PRESENT

**Improving scalability for the Azure Networking control plane. Analyzing and optimizing resource provisioning, reducing VM allocation times through cross-service collaboration, and improving platform stability via new observability and monitoring strategies scaling to billions of operations per day.**

**Implementing transparent on the fly migrations for customer resources in Azure to more efficient representations enabling more targeted data access, higher throughput, and reduced resource utilization.**

**Creating safe, reliable, and auditable admin-panel operations to enable faster and simpler mitigation of customer-reported incidents. Designing a feature-flags system to allow for safer deployments and testing in production.**

### **Microsoft Azure,** Redmond— *Software Engineering Intern*

JUNE 2020 - SEPTEMBER 2020

**Developed a configurable performance testing framework for a core networking service to validate the quality of all pull requests. Test framework records and compares execution time, CPU and Memory usage, GC pressure, and other key performance metrics.**

**Leveraged code instrumentation to produce tooling to assist in root cause analysis for performance regressions during development to prevent impact in production.**

### **Geeking Out Kids of Color (GOKiC),** Seattle— *Machine Learning Intern, Product Management Intern*

JUNE 2018 - SEPTEMBER 2019

**Designed Machine Learning Curriculum for underprivileged South Seattle communities in after school programs during the 2018-2019 school year. Used Unity3D and the Machine Learning extension to design an AI to navigate simulated environments.**

**Managed a team of approximately 15 Microsoft employees at Microsoft Hack for Good using scrum and agile practices to rebuild the GOKIC.org website.**

## Education

### **University of Washington,** Seattle — *BS in Informatics*

SEPTEMBER 2017 - JUNE 2021 | 3.74 GPA

Relevant courses:
**Web Development, Database Management, Database Design, Data Structures & Algorithms, Data Science (I, II), Design Methods, Artificial Intelligence, Linux & C/C++, Server-Side Development, Languages & Implementation, Software Architecture**

## Languages

**Proficient**
C# | Python | Go | Rust | SQL

**Familiar**

JavaScript | Java | HTML | TypeScript

## Technologies

**Proficient**

Git | GitHub | Azure DevOps | Docker | Windows | .NET

**Familiar**

Azure | Unity | Linux | DigitalOcean | Django | Flask | K6

## Projects

### CivicQA

CivicQA is a Constituent Management platform created to assist legislative assistants with responding to high volumes of mail. CivicQA employs a microservices based architecture using Go and Docker. (See GitHub)

### Puffin

Puffin is a dynamic programming language created from scratch, with an interpreter written in Rust. Puffin supports imperative and functional language features including structures and closures. (See GitHub)