Rafael Bayer

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Experience

Microsoft Azure, Redmond — *Software Engineer*

SEPTEMBER 2021 - PRESENT

Improving scalability for a core service in Azure Networking handling billions of calls per day. Refactoring hot code paths to make use of granular locking and data access strategies for increased concurrency.

Implementing on the fly migrations for customer resources in Azure to more efficient representations to enable 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.

Introducing real-time deterministic performance metrics across all operations in our service, improving alerting and observability. Enabling our team to validate changes in development and diagnose regressions in production.

Microsoft Azure, Redmond — *Software Engineering Intern*

JUNE 20202 - 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 20201 | 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

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)