

# Matthew Beirouti

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## TECHNICAL SKILLS:

*Coding / HDL:* C#, C/C++, Java, Python, Powershell, Go, Ruby (Rails), HTML, CSS, JavaScript, React, GraphQL, SQL, VHDL  
*Tools / OSes:* Git, IntelliJ, Visual Studio Code, Spring, Docker, Kubernetes, Travis, LaunchDarkly, AWS, Scikit, OpenCV, LaTeX, Microsoft Office, macOS, Windows, Linux

*Other Spoken Languages:* French (intermediary), Arabic (native)

## EDUCATION:

### McGill University, Montreal, QC

Bachelor of Engineering - Computer Engineering

May 2018

*Noteworthy Classes:* *Applied Machine Learning (COMP 551, graduate level), Artificial Intelligence (COMP 424), Intro to Computer Vision (ECSE 415), Leadership (ORGB 321), Strategies for Sustainability (MGPO 440)*

## WORK EXPERIENCE:

### Microsoft, Redmond, WA

November 2023 – Present

*Software Engineer (C# / C++) – Cloud Hardware Provisioning*

- Implemented Provisioning Service, a C# service that is now a critical component for the existing provisioning workflow for hundreds of thousands of Autopilot/Pilotfish machines, helping to mitigate thousands of Azure cloud security risks
- Led key feature and design decisions for Provisioning Service by gathering data, compiling it in design documents with proposed solutions, and getting buy in from leadership and other stakeholders through presentations and demo
- Added service instrumentation and logging to better understand experimental features and service impact
- Designed and implemented a secure C++ client that calls ProvisioningService as part of the provisioning workflow
- Improved user experience of an end-to-end testing framework by reducing usage friction through refactoring code, eliminating frustrating bugs, automating installation scripts and implementing a new central configuration framework
- Automated certain oncall workflows, cutting the time needed for specific manual processes by over 90%. Added documentation to help reduce ticket resolution time and reduce the number of incorrectly routed tickets

### Amazon, Seattle, WA

March 2020 – October 2023

*Software Development Engineer (Java) – Customer Data Foundations / AmazonAPI*

- Designed and implemented an API to allow services running on an internal non-imperative serverless compute platform to call our Tier-1 service, to help unblock major VP level goals
- Collaborated with PMs to add instrumentation to gather data that enables insight into specific customer usage patterns
- Helped redesign and refactor the backend services that support the delivery block feature on the retail website. This reduced operational risk, development complexity and will result in yearly savings of at least \$500k and 1 dev year
- Independently migrated our Tier-1 service code and fleet from JDK 8 to JDK 11 and from the x86 platform to aarch64
- Collaborated to design the onboarding experience for a newly developed API and implemented the models, views and controllers, enabling automated onboarding to this API at scale
- Lead biweekly operational excellence meetings to identify and address service anomalies and opportunities to add metrics, alarms, dashboards and documentation for monitoring, troubleshooting and maintenance of our Tier-1 service
- Organized and led the performance and stress testing of our biggest service in preparation for our largest yearly peak, saving the team around 40% in operating costs for these tests

### Cogo Labs, Cambridge, MA

October 2018 – November 2019

*Software Engineer (Golang) – Platform Team*

- Collaborated to architect and develop a high throughput microservice API which enables analysts to interface with hundreds of databases, 5 times faster per request or query than the previous API
- Independently built the full stack of an inhouse email validation tool, allowing employees to migrate away from a similar service provided by a 3<sup>rd</sup> party vendor, helping reduce costs by over \$500K per year
- Added accessibility features to improve user experience, based on collected feedback