

# Alex McNamara

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K1G1V4

## AREAS OF EXPERTISE

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- Full-stack software engineer with extensive work experience in:
  - Languages: Java, Javascript, Ruby, and Clojure.
  - Client frameworks: React, Angular.
  - Backend frameworks: Spring, Rails.
  - Databases: MySQL, DynamoDB, and Redis.
  - Infrastructure: Terraform, Consul, Vagrant, and Kubernetes; on AWS and Azure.
  - Cloud services: S3, SQS/SNS, SWF, Lambda, VPC, and IAM.
- Experienced software architect and technical lead, able to coordinate across multiple teams.
- Demonstrated ability to deliver work independently and laterally across organizations.

## MAJOR PROJECTS

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- Lead engineer on [Amazon for Windows](#) desktop-integrated retail application.
- Designed identity and access management systems for the [Amazon Go](#) grocery store.
- Founded a startup to create a Git-integrated project management SaaS suite.
- Created an early smartphone CMS and ad delivery platform, serving over 6 million users.

## WORK EXPERIENCE

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### Sabbatical

2017 – 2019

*Personal, Ottawa*

- Spent time with a family member who was undergoing medical treatment.

### Principal Software Engineer

2015 – 2017

*Outreach, Seattle*

- Responsible for overhauling MVP system architecture to improve scalability and security.
- Refactored monolith backend into identity and backward-compatible API micro-services.
- Incorporated OAuth and upstream directory integration to enable SSO and 3P API access.
- Technical advisor on SOC2 certification process, overseen by the Chief Infosec Officer.
- Profiled the [Everywhere](#) plugin, improving render performance by 20% with minor changes.

### Software Development Engineer

2012 – 2015

*Amazon, Seattle*

- Lead engineer on the [Amazon for Windows](#) retail application, launched with Windows 8.
- Designed an SPA framework specifically to manage and coordinate sandboxed web assets.
- Extended Amazon's Cordova-like mobile event bus to support a richer navigation model.
- Created a fully responsive UI, which adhered to the Metro design language spec exactly.
- Ensured that Amazon for Windows was Amazon's first fully-HTTPS retail experience.
- Designed customer identity management and entry/exit workflow for [Amazon Go](#).
- Prototyped early iterations of all screen experiences in Amazon Go for executive leadership.
- Implemented real-time cart inventory tracking experience for the Amazon Go mobile app.
- Technical advisor on [Amazon Books](#) inventory management and checkout systems.

## Software Engineer, Founder

2010 – 2012

*Dreamux, Montreal*

- Built a project management SaaS suite, for small to mid-sized software development firms.
- Wrote and open-sourced [Slurm](#), an experimental SQL ORM built in Clojure.

## Client Manager

2009 – 2009

*Web Impact, Toronto*

- Managed a small team of developers, coordinating resources for feature/support requests.
- Worked with customers on contract specs, and implemented initial prototypes as needed.
- Oversaw support request triage, and communicated progress with customers.

## Lead Software Developer

2007 – 2008

*Polar Mobile, Toronto*

- Created a mobile-focused advertising and analytics platform, serving over 6M users.
- Normalized data access layer, reducing query volume and infrastructure costs by 50%.
- Wrote monitoring and deployment shell scripts to improve service uptime.

## Software Developer, Contractor

2006 – 2006

*Nortel, Belleville*

- Embedded a provisioning web server into the experimental SIP firmware of the 1140E phone.
- Analyzed Cisco, Avaya, and Mitel hardware for cost-reduction and competitive analysis.

## EDUCATION

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### B.A.Sc. Software Engineering, with Honors

University of Ottawa

## RESEARCH AND PATENTS

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Dynamic inventory management user interface	10,303,187
Augmented reality enhanced interaction system	10,282,696
Color adaptable inventory management user interface	10,282,695
Hybrid native networked applications	9,349,123 and 9,503,551

I am the lead author on 16 patents which remain pending with the [USPTO](#), relating to research in:

- Sensor fusion.
- Object detection and classification.
- Physical user interaction.