

Alex McNamara

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K1G1V4

AREAS OF EXPERTISE

- 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

- 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

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

B.A.Sc. Software Engineering, with Honors

University of Ottawa

RESEARCH AND PATENTS

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.