

# Ross MacLeod (Mellgren)

Software architect with networking, systems, and team building skillset.

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Hello! I'm a friendly, hardworking, and knowledgeable software architect with over 15 years of experience in the industry. My passion for learning has led to my broad experience designing and implementing in a number of areas: networking, operations, databases, servers, and UIs.

## Skills and Technologies

### Languages

Haskell, Scala, Java, C, Python, SQL, Swift, Objective-C, HTML, CSS, JavaScript. Familiar with C#, F#, SML, OCaml.

### Storage and Transmission

PostgreSQL, SQL Server, MongoDB, Hadoop, Hive, HBase, REST, WebSockets, JSON, XML, Avro, protobuf.

### Tools and Platforms

macOS, iOS, Linux, Windows, Docker, Amazon AWS, Self-hosting, Firewalls, Load Balancers, Switches, Routers, Git, Nix, Puppet, Ansible.

## Selected Work Experience

### Confer Health, Inc. JAN 2017 — JUL 2018

I started early 2017 as the Senior Software Engineer at Confer Health, a health startup researching and developing a cutting-edge at-home medical diagnostic product. Along with my associate, our two-person software team:

- Designed and implemented complete system architecture.
- Implemented a completely automated CI pipeline along with full deployment automation for all systems from tools to production.
- Implemented an innovative structure logging system driving the monitoring, dashboards, and diagnostic systems.
- Managed project estimates, timelines, and workload while consistently delivering on monthly goals.
- Implemented an innovative sums-and-products library used for representing data model from the database all the way to the frontends, enabling rapid iteration on par with dynamic languages while maintaining static language correctness.
- Implemented iOS client application.
- Implemented GHCJS/Reflex based web applications.
- Implemented IoT device software using buildroot and Haskell.

### SimSpace Corporation NOV 2015 — JAN 2017

I started late 2015 as a Lead Software Engineer at SimSpace, a provider of virtual ranges for information security team training, assessment, product evaluation, and development.

- Led system design using small containerized services with a unified front end and scalable architecture.
- Introduced Haskell to team and trained other developers in its use, leading to improved productivity, lower incidence of defects, and more developer satisfaction.
- Led design and implementation of custom authentication and authorization framework to support complex authorization requirements gracefully.
- Extensively rewrote legacy user emulation system, shedding more than ½ of codebase while improving reliability, functionality, and maintainability.
- Primary maintainer of automated build infrastructure using: Jenkins, make, stack, sbt, npm, and Docker.
- Directly interacted with customers: sales engineering, maintaining Windows & Linux virtual networks, and continuing relationship.

### Paytronix Systems, Inc. JAN 2002 — FEB 2015

In 2002, I joined Paytronix Systems: a Gift, Loyalty, and Messaging SaaS company currently based in Newton. From its early stages as a startup with less than 15 employees to 76 employees when I left, I was a key contributor in many roles: software architecture and development, hiring and training, production and office infrastructure, team growth, and introduction of new technologies and techniques.

- Led multi-year successful effort to convert from monolithic to service oriented server architecture, yielding major benefits in design scalability, testing, developer productivity, and external integration.
- Introduced automated testing: outside-in functional web testing, service integration testing, unit testing, and property-based testing.
- Kept the company up to date on new technologies and processes. Introduced Scala to the company and trained team in idiomatic use.
- Built out redundant network architecture from core to border.
- Diagnosed and corrected numerous production issues, including complicated intermittent multi-system performance issues.
- Acted as a mentor for members of the development team both experienced and new, helping with design and implementation questions, diagnosis, and review.
- Participated in hiring process at a strategic and direct level.

### 2015

Cofounder and CTO at SocialBrain

### 2006 — 2007

Senior Network Architect at Swiftwill

### 2001 — 2002

Senior Network Engineer at USDataCenters