

## EXPERIENCE

### Staff Software Developer @ [1Password](#) · Nov 2020 → Today

I work at 1Password, one of the most loved password managers. I currently lead the growth side of the Billing & Payments team, and focus on optimizing our payments flows in-app. In prior roles I owned the signup flow with the Onboarding & User-education team, and lead the Design Systems team.

Current responsibilities:

- Drive and document team development processes, including code review and technical planning
- Review and respond to external security audits for the 1Password web app
- Review cross-team design documents and code
- Design and build front-end UI components and features (*TypeScript, React*)
- Design server features and data migrations (*Golang, MySQL*)
- Mentor new developers on testing, version control, and software design

### Senior Software Developer @ [MetaMask](#) · Jan 2018 → Nov 2020

I worked on MetaMask, a browser extension that allows websites to interact with Ethereum APIs. In my time working on the project, MetaMask doubled in users from roughly 500k to 1M+ users across multiple browsers. [All of my work on the extension is available on GitHub.](#)

Roles & responsibilities:

- Designed and built full stack features for the extension (*JavaScript, React, Redux, Node.js*)
- Implemented UI components based on designs and wireframes in Figma
- Maintained a medium-sized open source project on GitHub: 3.5k stars w/ 150+ contributors
  - Responded to user feedback and triaged issues from the community
  - Reviewed code from the community and helped contributors land their patches
- Maintained JavaScript packages across the organization (*10+ packages, 12k+ dependents*)

### Senior Software Developer @ [Iceberg Finder](#) · Dec 2017 → Jan 2020

I built [Newfoundland and Labrador's Iceberg Finder website](#). The site allows people to locate icebergs, share photos, and has moderation from provincially operated Visitor Information Centres. It remains the province's go-to website for tourists and locals.

Roles & responsibilities:

- Built a web-based mapping application that displays geospatial iceberg data
- Built UI components based on designs in Sketch (*React, Redux*)
- Built API integrations with third-party photo sharing (*redux-observable, RxJS*)
- Designed HTTP APIs for processing, storing, and querying geospatial data (*Node.js*)
- Managed server infrastructure on DigitalOcean (*Terraform*)

Awards:

- Gold - 2019 ICE Awards for Apps/Mobile - [IcebergFinder.com](#)
- Gold - 2019 ICE Awards for Website - [IcebergFinder.com](#)
- Silver - 2019 Marketing Awards Digital - Creative Use of Technology
- Gold - Digital Marketing at the 2018 HSMAI Adrian Awards Competition
- Platinum - Digital Campaign at the 2018 HSMAI Adrian Awards Competition

## Software Developer @ [Bluedrop Learning Networks](#) · Dec 2016 → Jan 2018

I worked on Bluedrop's [SkillsPass website](#) and built the first version of Bluedrop Q. SkillsPass allowed companies to manage training certifications for their workers and Bluedrop Q offered companies a web- and workflow-based form editor for their employee and customer onboarding.

Roles & responsibilities:

- Built web components based on high-fi UI designs and low-fi wireframes (*Angular 2, React*)
- Designed RESTful APIs for web front-ends (*Node.js, FeathersJS*)
- Maintained internal JavaScript packages and tooling (*npm, Bash*)
- Mentored developers on unit testing, JavaScript, and Git

## Lead Software Developer @ [Eastern Edge Robotics](#) · Jul 2015 → Jun 2016

I was the lead software developer for the 2016 Eastern Edge Robotics team. We competed at the 2016 MATE International ROV Competition against 30 teams from around the world, [winning 1st overall at the university level](#).

Roles & responsibilities:

- Led a team of software developers, planned and delegated tasks
- Contributed to technical documentation for the vehicle, its control software, and the mission
- Built control software for an underwater vehicle (*Java, Kotlin, Reactive Extensions*)

## Software Developer @ [Amec Foster Wheeler](#) · Apr 2014 → Aug 2015

## Software Developer @ [Amec Foster Wheeler](#) · May 2016 → Dec 2016 ↩

I worked in Met-Ocean Services at Amec Foster Wheeler on operational weather forecast tooling. I also built [an ice surveillance system used for risk management and ice forecasting](#) that tracked icebergs in the Atlantic Ocean and provided movement forecasts for offshore ships.

Roles & responsibilities:

- Designed and built a processing pipeline to parse and work with geospatial data (*C#, Rx.NET*)
- Built a mapping application that displayed icebergs and their forecasts (*JavaScript, Dojo, ArcGIS*)
- Maintained weather forecast tooling (*Python, Node.js, Docker, Ansible, shell scripts*)
- Administered and automated Ubuntu and Fedora servers, both on-premise and with AWS

## OPEN SOURCE

### [Private Relay](#) · May 2020 → Today

*HAProxy, Docker, Terraform*

A privacy-preserving TCP proxy based on Signal's implementation of GIF search. The server runs HAProxy in TCP mode and a TLS connection passes through to the destination host, providing IP address privacy at the cost of an extra TCP connection. The project is published as a Docker image and Terraform module.

### [RxBroadcast](#) · Jan 2016 → July 2020

*Java, RxJava, mutation testing, distributed systems theory, Docker*

RxBroadcast is a distributed event library for the Java Virtual Machine, factored out of the control software for an underwater robotics project. The library supports UDP broadcasts, ordering requirements, events on a single machine and across networked machines. It is built using Reactive Extensions for Java, complete with integration tests, unit tests, and 99% mutation test coverage.

## RESEARCH PAPERS

### [Sunken History of Grand Lake](#) · Dec 2017

Published in *The Journal of Ocean Technology*, Vol. 12, No. 4, 2017