

# Stephen Melinyshyn

✉ [stephen.melinyshyn@gmail.com](mailto:stephen.melinyshyn@gmail.com) 🌐 [melinysh.me](http://melinysh.me) 🐦 [melinysh](https://twitter.com/melinysh) 📺 [melinysh](https://www.youtube.com/channel/UCv33333333333333333333)

## Employment

**Citadel** New York, NY

*Software Intern*

Sept. 2019 to Dec. 2019

- Refactored firm-wide portfolio size calculation code, reducing running time from 4 hours to 5 minutes
- Added dozens of new timeseries data ingestion pipelines into a central system to remove legacy systems
- Contributed to reporting software that produced vital recurring reports for portfolio managers and top executives outlining current profit and loss figures and risk exposure

**Stripe** Seattle, WA

*Infrastructure Intern*

Jan. 2019 to Apr. 2019

- Crafted new infrastructure for the secure Cardholder Data Environment
- Enabled cross-cluster database replication by creating underlying infrastructure and custom code
- Oversaw project to guarantee timely deletion of sensitive transient transaction authentication data
- Reduced the compliance burden of credit card security standards on the rest of Stripe engineering

**Apple** Cupertino, CA

*Safari Intern*

Apr. 2018 to Aug. 2018

Developed exciting new features for the Safari application on MacOS and iOS.

**Microsoft** Seattle, WA

*Backend Intern*

Sept. 2017 to Dec. 2017

- Developed highly requested file storage solution for Microsoft Dynamics 365 CRM leveraging Azure
- Lowered storage costs by over 90% and provided a 30x increase in storage capacity
- Implemented secure valet-key design pattern to handle the scale of Fortune 500 companies
- Ensured backwards compatibility with legacy enterprise software

**Shopify** Toronto, ON

*Backend Intern*

Jan. 2017 to Apr. 2017

- Reduced response time by over 70% on key webpages by refactoring, optimizing database tables, and caching expensive calculations
- Shipped and ran zero-downtime schema migrations on active tables with millions of rows of critical data
- Coordinated with Amazon to integrate modern API changes and eliminate deprecated API

**Wattpad** Toronto, ON

*iOS Developer Intern*

May 2016 to Aug. 2016

- Ran numerous A/B experiments to boost user engagement, retention, and satisfaction
- Increased monthly usage by over 10 million minutes on mobile

## Projects

Dropboxfs, an in-memory filesystem for Dropbox – [bit.ly/dropbox\\_fs](https://bit.ly/dropbox_fs)

- Designed and implemented an in-memory filesystem in userspace (FUSE) that connects to Dropbox written in Go
- Allows for users to access their Dropbox contents on demand without requiring disk space
- Supports all regular file operations and synchronizes changes across devices

Fastify – [bit.ly/fastify](https://bit.ly/fastify)

- Prize-winning Download Accelerator as a Service written in Go at QHacks
- Coordinated an EC2 cluster to download then seed files with BitTorrent to achieve 4x typical download speeds for clients

Nfinite.space – [bit.ly/nfinite](https://bit.ly/nfinite)

- Award-winning cloud storage service that stores files without the need for a datacenter by intelligently and dynamically sharding files to connected peers
- Solely responsible for developing our backend using Go and CockroachDB on AWS

Project Clay, a Twitter Activity Service – [bit.ly/projectclay](https://bit.ly/projectclay)

- Recreated a personalized version of Twitter's "Activity" feature in Go with MongoDB
- Collected, analyzed, and stored millions of tweets in order to detect near real-time events using AWS

## Skills

### LANGUAGES

Go  
Ruby  
Objective-C  
Swift  
C++  
Python  
SQL

### TOOLS

Vim  
Xcode  
Instruments  
Git  
AWS  
GDB  
MySQL

## Awards

Apple Inc, WWDC Scholarship

- Won international competition for a ticket to Apple's World Wide Developers Conference in 2014, 2015 and 2016
- Developed an Objective-C & Swift application with creative and playful UI
- Judged and chosen by Apple out of thousands of applicants to receive scholarship each year

QHacks, Best Use of AWS Feb. 2017

Awarded for work on Fastify.

Hack The North, Best Use Of AWS Sept. 2016

Awarded for work on Nfinite.space.

CODEFest, 3rd Place Oct. 2015

Awarded for work on NearbEYE.

Tech Retreat Hackathon, 1st Place Aug. 2015

Awarded for work on MarketMesh.

## Education

University of Waterloo

BSE Software Engineering 2020

President's Scholarship of Distinction, President's International Experience Award

## Interests

Biking, Boarding, Hiking, Photography, Ping Pong, and Twitter