Nicholas Pun

Software Developer, Math Enthusiast

Skills

Languages: Javascript, Python, Ruby, MATLAB, Rust, Racket, Scala, Haskell, C/C++

Frameworks, Databases & Tools: Angular, React, Vue, Backbone, Meteor, Rails, Node, DynamoDB, PostgreSQL

Experience

Software Developer — Kitchener, ON

Vidyard | Analytics Team — Sept. 2018 – Dec. 2018

- Rewrote Youtube analytics layer in the Ruby on Rails backend to provide more accurate data for over 8000 organizations and prevent from constantly exceeding YouTube Data API quota
- Completed final details for a new video analytics generation service (written in Node): created an ECS task to handle analytics job loss due to Amazon EMR Cluster errors. Task was responsible for tracking and periodically resubmitting lost and stale analytics jobs
- Ensured GDPR compliance throughout services: preprocessed and filtered loggers in the backend and moved authentication tokens to authorization headers in the JavaScript frontend

Software Developer — San Francisco, CA

Freckle Education (formerly Front Row Education) — Jan. 2018 – Apr. 2018

- Created a new summary page for over 9000 school administrators and a more streamlined interface for our early learners (a significant portion of our 1 million+ learners) to read stories using React and Backbone
- Improved the frontend test suite coverage by adding Jest logic and snapshot tests, and maintaining QA testing suite
- Learned the basics of Haskell by making small backend bug fixes and adding Hspec unit tests

Frontend Developer — Mississauga, ON

Finastra (formerly D+H) — Jan. 2017 – Apr. 2017

- Reduced client-side load time by 20% through frontend optimization: implemented pagination over several components and worked with the backend team to reduce payload size and make smaller, faster API calls
- Improved regression test coverage by over 50% by writing automated test suites using Protractor.
- Took part in designing a companion web app from scratch using Angular 2.0 and ngRx

Undergraduate Researcher — Waterloo, ON

Physics of Information Lab – University of Waterloo — May 2016 – Aug. 2016

- Researched new techniques in processing audio data signals to further optimize current methods and improve on bit-rate reduction
- Implemented an algorithm based on these techniques using Matlab, and applied techniques towards a project in number theory and primes
- Wrote paper summarizing findings: https://arxiv.org/abs/1808.00572

Projects

Beer Necessities — In-Progress

- I was having trouble keeping track of all the beer I drink, so I built a full-stack project with a React frontend and Rust backend (using Rocket) to do so.

Education

University of Waterloo — 2015-2020

Bachelor of Computer Science (Expected Graduation: April 2020)

- Relevant Coursework: Introduction to Machine Learning, Distributed Systems, Algorithm Design and Analysis, Introduction to Optimization, Scheduling Theory, Graph Theory, Combinatorics, Real and Complex Analysis, Data Structures and Data Management, Programming Languages