Nicholas Pun

Software Developer, Math Enthusiast

Email: nicholaspun99@gmail.com
Website: nicholaspun.github.io
LinkedIn: /in/nicholaspun
Github: nicholaspun

Skills

Languages: Python, Javascript, Ruby, MATLAB, Rust, Scheme, Scala, Haskell, C/C++, Prolog, SML

Frameworks, Databases & Tools: Angular, React, Vue, Backbone, Meteor, Rails, Node, Firebase, DynamoDB, PostgreSQL, CircleCI, Docker, Kubernetes, Jenkins, Ansible, Splunk, AWS

Experience

Engineering Intern — San Francisco, CA

Credit Karma | Developer Efficiency – Dev. Environments Team — May 2019 – Aug. 2019

- Developed python-based tooling for the deployment, servicing and retrieval of developer environments (Kubernetes clusters on AWS EC2)
- Created a slackbot in Ruby as a user-friendly interface for the above tooling and a health monitoring service in Typescript to record and track health related metrics on the developer environments
- Gained familiarity with CircleCI, Docker, kubectl, Jenkins, Ansible and Splunk

Software Developer — Kitchener, ON

Vidyard | Analytics Team — Sep. 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
- Improved error handling and data recovery from Amazon EMR Cluster errors in video analytics generation service (written in Node)
- Ensured GDPR compliance throughout services by preprocessing and filtering loggers

Software Developer — San Francisco, CA

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

- Created 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 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 algorithm based on these techniques using Matlab, and applied techniques towards a project in number theory and primes. Currently submitting paper summarizing findings with preprint available at: https://arxiv.org/abs/1808.00572

Projects

Beer Necessities — In-Progress

- Full-stack project to log my beer journal (which includes my impressions on the drink, as well as ratings of the beverage)
- Written in React and currently rewriting backend in Python (from Rust) to make use of NLTK, in attempt to create a sentiment-based custom search engine for more accurate beer retrieval.

Education

University of Waterloo — 2015-2020

Bachelor of Computer Science (Expected Graduation: April 2020)

- Relevant Coursework: Introduction to Machine Learning, Distributed Systems, Randomized Algorithms, Combinatorial Optimization, Scheduling Theory, Graph Theory, Algebraic Graph Theory, Network Flow Theory, Game Theory, Enumeration, Real and Complex Analysis, Group and Ring Theory, Principles of Programming Languages