Eugene Y. Q. Shen

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EDUCATION

UNIVERSITY OF BRITISH COLUMBIA

Bachelor of Applied Science
Cumulative Average GPA: 88.9% (4.30/4.33)
Computer Science/Eng.: 96.1% (4.33/4.33)
Sept 2015 - May 2020; Vancouver, Canada
Major in Engineering Physics, Minor in Music

SKILLS

Over 10000 lines:
JavaScript (TypeScript, Node.js, React.js, Vue.js)
Python (Flask, Tornado, Django) • Ruby (Rails)
Over 1000 lines:
C++ • Java (Android) • Shell • MATLAB • C
Tools:
Git • GitHub • Jetbrains • LaTeX • SQL • Vim

COMPETITIONS

16th/4046, IEEEXtreme	Nov 2018
8th in Div. 1, ACM-ICPC Pacific NW	Nov 2017
2nd in Div. 2, ACM-ICPC Pacific NW	Nov 2015
4th/1706 in Round One, NACLO	Mar 2015
2nd in Western Canada, CCC	Jan 2014

SCHOLARSHIPS

Trek Excellence Scholarship	(2016, 2017, 2018)
Charles and Jane Banks Scholarship	(2018)
John Collison Mathematics Memorial S.	(2018)
EXPO 86 Scholarship	(2016)
Sir Winston Churchill Shield	(2015)
R. A. Pyke Mathematics Memorial S.	(2015)

COURSES

COMPUTER SCIENCE

Intermediate Algorithm Design/Analysis	(95%)
Intro to Computation/Programs (Racket)	(93%)

COMPUTER ENGINEERING

Real-Time Operating Systems	(100%)
Digital Systems and Microcomputers	(100%)
Operating Systems	(90%)
Principles of Software Construction	(98%)
Intro to Computation for Engineers (C)	(98%)

MATHEMATICS

Applied Linear Algebra	(96%)
Ordinary Differential Equations	(93%)
Multivariable and Vector Calculus	(93%)
Intro to Linear Systems	(94%)
Signals and Systems	(98%)

WORK EXPERIENCE

FLEXPORT — Software Engineering Intern, Airfreight

June 2019 - Aug 2019 — San Francisco, California, United States

- One of two engineers that implemented the Ruby on Rails backend to ingest the contents in all of Flexport's air carrier contracts and flight allotments.
- Designed and realized a denormalized table of all available flight instances.
- Advised data science on optimally assigning shipments to flights, using my table as the source of truth, potentially saving millions of dollars a month.

GOOGLE — Software Engineering Intern, Cloud/Node.js

May 2018 - Aug 2018 — Sunnyvale, California, United States

- Made a TypeScript library encapsulating the Stackdriver Debugger REST API.
- Developed a service for ndb, a debug adapter for Visual Studio Code, and a proxy server and Chrome extension for Chrome DevTools using my library.

NEXEDI — Software Engineering Trainee (Stagiaire)

Jan 2017 - Apr 2017 — Lille, Hauts-de-France, France

- Prototyped an internal chat app using WebRTC within Nexedi's ERP5 system.
- Created the official tutorial for using Nexedi's RenderJS and jIO frameworks.

UBC — Teaching Assistant, Intro to C for Engineers

Jan 2016 - Apr 2016 — Vancouver, British Columbia, Canada

- Marked 70 labs a week and wrote a Python script for automatic compilation.

TECHNICAL PROJECTS

DNA ORIGAMI — Capstone Project 2

Jul 2019 - Present — Dr. Kyle Briggs, University of Ottawa

- Synthesizing DNA strands to fold into input shapes, using a genetic algorithm.

OVARIAN CANCER CLASSIFICATION — Capstone Project 1

Sept 2018 - Apr 2019 — Dr. Ali Bashashati, BC Cancer Agency

- Trained a convolutional neural network to classify subtypes of ovarian cancer.
- Explored using a generative adversarial network to generate additional data.

CHANGENUITY — Startup (Nov 2016 - Dec 2017)

- Built a platform that matches freelancers with global development projects.
- Led backend team of 2/5 students; used Ruby on Rails, Heroku, and AWS.

UBC REQ — Course Prerequisite Tree (Apr 2016 - Dec 2017)

- Scraped and parsed natural language course requirements from UBC sites.
- Displayed the tree with React.js for web and Tkinter in Python for desktop.

POLYTOPE VISUALIZER — IB Math Project (Sept 2015 - Feb 2016)

- Rendered 4D polytopes and over 60 uniform polyhedra as they rotate in 4D.

Other projects (ask me!): computer vision for ice nucleation; Dr. Allan Bertram
- distributed process control simulation for education; Dr. Jonathan Verrett
- sight reading drill generator, with Android app for practice; Dr. John Roeder
- autonomous tape-following, infrared-sensing, toy-gripping robot; ENPH253
- modular system for safe descent and flight tracking of payloads; UBC Rocket
- custom radio-frequency satellite communications system PCB; UBC Orbit