

## EDUCATION

### Brown University

Pursuing Bachelor of Science in Math May 2020

Selected Courses: Topology (Graduate), Complex Analysis, Reading Program in Category Theory, Topics in Abstract Algebra, Functions of Several Variables, Partial Differential Equations, Probability, Algorithms

### Budapest Semesters in Mathematics

Semester Abroad Spring 2019

Expected Courses: Combinatorics, Graph Theory, Lie Groups, Analytic Number Theory

### Commonwealth School

Diploma June 2016

Selected Courses: Abstract Algebra, Theoretical Calculus, Mathematical Logic, Introduction to AI, Introduction to Compilers

## WRITINGS AND TALKS

### The Inherent Instability of Disordered Systems

Paper written at NECSI that introduces a way of measuring the change in a complexity profile, and uses this framework along with Ashby's law to talk about how complex systems change over time. [arxiv.org/abs/1812.00450](https://arxiv.org/abs/1812.00450)

### FizzBuzz In Haskell

A talk introducing Haskell through three different presentations of FizzBuzz. [owenlynch.org/notes/FizzBuzz In Haskell.pdf](https://owenlynch.org/notes/FizzBuzz%20In%20Haskell.pdf)

### Meditations on Tensors

Blog post explaining tensors from several different angles, intended to give intuition that might not be found elsewhere. [owenlynch.org/posts/2019-01-02-meditations-on-tensors/](https://owenlynch.org/posts/2019-01-02-meditations-on-tensors/)

## EXPERIENCE

### Tesla Motors

Firmware Intern Summer 2018

Developed software in Haskell to facilitate development of internal car network. Designed new algorithm for tracking redundancy and failure-resilience in communication components.

### New England Complex Systems Institute

Student Researcher 2016-2017

Researched and implemented novel techniques in image processing. Wrote large-scale data scraping infrastructure. Helped to migrate large amounts of data. Studied novel information theoretic methods for modeling changes in complex systems. Worked in Python, R, and C.

### Brown CS Department

Algorithms TA Fall 2018

### Brown Math Department

Math Resource Center Tutor 2017

## PROFICIENCIES

Haskell, C/C++, Python, MATLAB, Mathematica, Linux, Git,  $\text{\LaTeX}$  (obviously). I am a very capable programmer, and I also have familiarity with many technologies not listed here.

## INTERESTS

Category Theory and Applied Category Theory, Differential Geometry, Type Theory and Homotopy Type Theory, Algebraic Topology, Intuitionist Logic, Formal Verification, Algorithms, Learning New Things

## MISCELANEOUS

I play violin in the Brown University Orchestra as well as chamber groups and pit orchestras, and I swing dance.