

Logan Schelly

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Education

Bachelors of Science in Mathematics

Brigham Young University

April 2020

GPA: 3.17 out of 4.0

- Applied and Computational Mathematics Emphasis (ACME)
- Computer Science Minor
- Recognized for outstanding performance in Mathematics in 2020 and 2018

Skills

Programming Languages

- | | | |
|--------------|-----------------------|--|
| • Python | Very Comfortable | used in 8 lab classes and 4 lecture classes |
| • C++ | Proficient, but rusty | used in 3 lecture classes |
| • C | Proficient | used in 2 lecture classes |
| • Java | Proficient, but rusty | used extensively in 1 lecture class |
| • JavaScript | Beginner | self taught at javascript.info , and listed as a contributor |

Other Tools

- | | |
|--------------------------------|----------------------|
| • \LaTeX – Proficient | • Git – Intermediate |
| • Spreadsheets – Proficient | • HTML – Beginner |

Soft Skills

Tutoring • Attention to Detail • Troubleshooting • Public Speaking • Leadership • Project Coordination

Work Experience

Head Upper Division Tutor

Provo, UT

BYU Math Lab

Sep 2014 – April 2020

- Tutored Linear Algebra, Multivariable Calculus, Differential Equations, and Mathematical Proof classes.
- Conducted weekly meetings to help our team of 10-20 upper division tutors prepare for that week's concepts.
- Coordinated exam reviews, and often taught them. 10 to 200 students attended, depending on enrollment and subject.

Projects

Math Lab Student Sign Up Analysis

Fall 2019 – Winter 2020

- Consolidated data spread across 60+ Excel files.
- Used Pandas to analyze the almost 900,000+ instances of students signing up for tutor help.
- Identified busiest times of the week, and the topics students most often came in for help with.
- Advised scheduling more tutors in the mornings based on my findings.

HTTP Proxy

Winter 2020

- C program that relayed user requests to end server, and relayed server responses to user.
- Used `regex.h` to verify that user requests met HTTP formatting requirements.
- Handled concurrent requests with a threadpool using `pthread.h` and `semaphore.h`.

DNS Stub Resolver

Winter 2020

- Program interfaced with DNS servers to look up IP addresses associated with a web domain name. For example, it would figure out that the domain name `www.example.com` is associated with IP address `93.184.216.34`.
- Formatted queries to DNS standards, sent the queries with UDP, and then decoded responses.
- Written C with `unistd.h`, `sys/socket.h`, `arpa/inet.h`, and `netinet/in.h`.

Inverted Pendulum Control

Winter 2019

- Modified the Python code from the CartPole-v1 environment of OpenAI's gym library.
- Updated from Euler's method to Runge-Kutta.
- Applied an LQR control scheme to keep the pendulum upright.

Android App – Family History Map

Summer 2018

- Wrote both the client and server in Java.
- Displayed family history data with a Google MapFragment.
- Implemented activities for log-in, map interaction, life event details, and app settings.
- Wrote the SQL commands that the server would use to store and retrieve user data.