

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 (and Applicable Libraries)

Python ————— Very Comfortable ————— used in 8 lab classes and 4 lecture classes

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|--------------------|---------|----------------|------------------|
| – IPython parallel | – NumPy | – Pandas | – Selenium |
| – MPI for Python | – Scipy | – scikit-learn | – Beautiful Soup |

C ————— Proficient ————— used in 2 lecture classes

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|-------------------------|-----------------------------|-------------------------------|
| – <code>unistd.h</code> | – <code>pthread.h</code> | – <code>omp.h</code> (OpenMP) |
| – <code>signal.h</code> | – <code>sys/socket.h</code> | – <code>regex.h</code> |

C++ ————— Proficient, but rusty ————— used in 3 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

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|--------------------------------|----------------------|
| • \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

- 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.
- Overhauled the tutor handbook.
- Expanded the tutor application test to include a Mathematical Proof section.

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`.

OpenMP with Mandelbrot Set

Winter 2020

- Parallelized the [Mandelbrot visualization code](#) posted on github by Andrej Bauer.

Tiny Shell

Winter 2020

- Wrote a simple shell that could handle process creation, I/O redirection and pipelines, and process control.
- Used C with `unistd.h` and `signal.h`.