

Raphael Long

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EDUCATION

University of Illinois at Urbana Champaign

B.S. in Computer Science

May 2021

4.00/4.00 GPA

Relevant Coursework

Algorithms & Models of Computation, Artificial Intelligence, Machine Learning, System Programming, Computer Architecture, Data Structures, Discrete Structures, Software Design Studio

EXPERIENCE

Facebook

Software Engineering Intern

Menlo Park, CA

May 2019 - Aug. 2019

- Developed feature for streaming service in C++, led to 80% decrease in memory usage
- Created CLI tool to check output of routing service, using Python, C++, and Thrift
- Created testing framework to verify correctness of routing service

CS 241 System Programming

Course Assistant

Champaign, IL

Jan. 2019 - Present

- Hosted office hours and answered questions on online message board
- Contributed to assignment development team, worked on creating new assignment
- Taught review lectures on memory and storage

CS 126 Software Design Studio

Course Assistant

Champaign, IL

Sept. 2018 - Dec. 2018

- Hosted office hours and code reviews, taught design principles and test driven development
- Mentored students on industry best practices, including code style and version control

Machine Learning Research (with Phil Long)

- Improved the best lower bound on halflines error, matching the lower to the upper bound
- Studied lower and upper bound on $\text{opt}(2)$, the two sample case

Palo Alto, CA

May 2018 - Present

Capital One

Software Engineering Intern

Champaign, IL

Jan. 2018 - May 2018

- Restructured SQL database for faster queries, decreasing queries on home page by 88%
- Built data visualization tools for internal use using Angular 5
- Migrated legacy code to utilize new internal tools and styles

EXTRACURRICULARS

Mechmania 2nd Place (out of 17)

Sept. 2019

Google Tech Challenge 2nd Place (out of 37)

April 2019

MechMania 2nd Place (out of 37)

Sept. 2018

PROJECTS

Facial Recognition

- Used C++ OpenCV to detect, recognize, and label faces from a webcam in real time

Apr. 2018 - May 2018

Schedule Optimizer

- Generates schedules for students, resolving conflicts and minimizing gaps between classes
- Created production pipeline and algorithm using Node.js and MongoDB

Sept. 2017 - Dec. 2017

SKILLS

Proficient in C++, C, Java, Python (numpy, pandas) Git, UNIX, Thrift, Javascript (Node, Angular), HTML and CSS
Experienced with MatLab, SQL, MongoDB and Lua