

Samiur Khan

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Education

University of Michigan, Ann Arbor

Class of 2020

- B.S.E. in Computer Science, Minor in Biochemistry

Professional Experience

Google – Data Infrastructure and Analysis – Mountain View, CA

May 2018 - Present

Engineering Practicum Intern

- Working with a team to develop an internal logging system for a distributed system framework

University of Michigan Medical School

December 2017 - Present

Research Engineer - Zhang Lab, Dept. of Computational Medicine and Bioinformatics

- Working with two scientists to evaluate the effectiveness of using the distance between amino acids to pre-filter searches for protein structures with similar alignments.
- Designed and ran experiments to evaluate the effectiveness of different protein distance profiles.
- Refactored and modernized pre-existing software libraries, allowing for large scale protein structure alignment testing.

University of Michigan Electrical Engineering and Computer Science Department

June 2017 - Present

Teaching Assistant for EECS 398 - Computing and Tools for Computer Scientists

- Class teaches how to learn about and how to use the various tools used by computer scientists (like git, linux, debuggers, virtual file systems, linters, etc...).
- Maintained the course site (c4cs.github.io), and worked with a team to run office hours to help students with weekly assignments.

Google – Street View Infrastructure – Mountain View, CA

May 2017 - August 2017

Engineering Practicum Intern

- Working with a team to prototype an internal tool that showed animations of Google Street View data.
- Designed and implemented a video encoder using FFmpeg that can encode MP4s, FLVs, and WebM videos. Worked with a team to incorporate CPU benchmarking tests to verify that it was servable over HTTP requests.
- Deployed the video recorder with a C++ based HTTP server that can handle video generation for different input requests.

Personal Projects

Condit

August 2017 - Present

- C++ object for holding information about the status of binaries. Working with a team to expand the tool to support programming languages and to expand its use. Learn more: github.com/samiurkh1n/Condit

TMalign

December 2017 - Present

- Tool that aligns and calculates the similarity between two protein sets using their PDB file. Originally implemented by Zhang lab, I added features to automate testing with entire directories of proteins rather than just two, speeding up testing and helping maintain key speed benchmarks. Find out more at: github.com/samiurkh1n/TMalign

Awards

- Gates Millennium Scholar, merit and needs based scholarship granted to less than 2% of around 55,000.
- Shipman Scholar, merit scholarship granted to less than 1% of 15862 incoming students.

Skills & Interests

Languages and Technologies: C++, C, Protocol Buffers, gRPC, Shell Scripting, MATLAB, HTML, CSS, JavaScript

Skills: Public speaking, software documentation, software API design, software testing, computer architecture, algorithm design and analysis

Interests & Hobbies: I love non-fiction (particularly history) books. I am also an amateur road cyclist.