Jacob Hegna

2603 Windsor Place, Apartment A302
Lawrence, Kansas 66045
(913) 945-0706
jacobhegna@gmail.com
www.github.com/jacob-hegna

EDUCATION

Bachelor of Science, Computer Science August 2015 - Present
Bachelor of Science, Mathematics August 2015 - Present
University of Kansas (Honors College), Lawrence, KS
Expected graduation: May 2019

Black-Babcock Mathematics Scholar
Dean's List: Fall 2015, Spring 2016, Fall 2016
GPA: 4.0

EXPERIENCE

Undergraduate Researcher May 2016 - Present

- Developed a static branch prediction algorithm for disassembled executables, with over 70% accuracy for certain heuristics.
- Implemented the algorithm in C++, while having to parse x86 assembly.
- Worked alongside multiple PhD candidates to achieve development goals.
- Managed data sets of 10+ gigabytes.
- Maintained proper version control via Git.

FIRST Robotics Engineer August 2013 - March 2015

- Lead a team of programmers in managing a C++ codebase for FIRST robotics team 2410.
- Organized code-contributions of team members through Git.
- Maintained communication with hardware and electronics teams to ensure proper specifications were given.

PERSONAL PROJECTS

Assembler/disassembler for the Intel 8080 microprocessor

- Developed a platform able to handle and manipulate well-formed Intel 8080 binaries.
- Maintained proper version control via Git.
- Leveraged continuous integration via Travis CI to ensure build stability.

SKILLS

Programming Languages: C++, C, x86 Assembly, Javascript, Rust, Java, Python

Relevant Coursework: Programming Language Paradigms, Embedded Systems, Discrete Structures, Programming I/II, Mathematical Theory of Statistics, Probability, Modern Algebra, Linear Algebra I/II, Topology

Technology: GDB, Git, Linux, Node.js, LaTeX