

Jacob Hegna

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EDUCATION	<i>Bachelor of Science, Computer Science</i>	August 2015 - Present
	<i>Bachelor of Science, Mathematics</i>	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	<i>Undergraduate Researcher</i>	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.

<i>FIRST Robotics Engineer</i>	August 2013 - March 2015
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- Member of a team of programmers in which I managed 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	<i>Assembler/disassembler for the Intel 8080 microprocessor</i>

- 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	<i>Programming Languages:</i> C++, C, x86 Assembly, Javascript, Rust, Java, Python
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Relevant Coursework: Programming Language Paradigms, Embedded Systems, Discrete Structures, Programming I/II, Differential Equations, Statistics, Probability, Linear Algebra I/II, Modern Algebra, Topology

Technology: GDB, Git, Linux, Node.js, L^AT_EX