

# Alexander David Lukens

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## SUMMARY

4th Year Undergraduate Electrical Engineering Student pursuing specialization in VLSI Design and Computer Architecture. Familiar with Electronic Design Automation tools, analysis and design of logic circuits, and coding in object-oriented programming languages. Seeking internship or Co-op in Design Verification, System-on-Chip Design, or a related field

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## EDUCATION

2018 - Present	<b>ILLINOIS INSTITUTE OF TECHNOLOGY</b> <i>Bachelor's of Electrical Engineering, Expected May 2021</i> Specialization in VLSI Design / Minor in Computer Science Camras Scholarship Recipient, GPA: 4.0 / 4.0 Relevant Course work: ECE 429 - Introduction to VLSI Design ECE 441 - Microprocessors and Embedded Computing CS 450 – Operating Systems	Chicago, IL
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## SKILLS

- Proficient with Cadence Virtuoso EDA Suite
- Knowledgeable in CMOS Circuit layout and design
- Leveraged C programming to execute GRUB bootloader and interact with modified low-level kernel
- Developed VHDL Design in Xilinx Vivado for use on Diligent FPGA
- Applied C++ programming to build an interface for processing algebraic expressions
- Experienced with employing Assembly Language in low-level environments

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## EXPERIENCE

2019 - 2020	<b>IDEA SHOP PROTOTYPING LAB</b> <i>Lab Mentor</i> <ul style="list-style-type: none"><li>• Ensured safe operation of electronics, power tools, laser cutters, and additive prototyping equipment</li><li>• Documented machine operation instructions and guides for inexperienced members</li><li>• Led students in rapid prototyping of models using Autodesk Design Suite</li><li>• Communicated with supervisor and other staff about laboratory conditions</li></ul>	Chicago, IL
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## PROJECTS

2019 - 2020	<b>BREADBOARD MEMORY DESIGN</b> <i>Student, Illinois Institute of Technology</i> <ul style="list-style-type: none"><li>• Utilized 74-series logic devices and Static RAM chips to expand memory capacity of MC68000 system</li><li>• Constructed schematic for breadboard implementation of design using Boolean logic gates</li><li>• Debugged circuit and ensured functionality using oscilloscope, function generator, and digital logic analyzer</li></ul>	Chicago, IL
2020 - 2020	<b>MC68000 MONITOR PROGRAM</b> <i>Student, Illinois Institute of Technology</i> <ul style="list-style-type: none"><li>• Created and Implemented robust monitor program for the Motorola MC68000 Microprocessor</li><li>• Reinforced skills in analyzing and creating programs in Assembly Language. Practiced debugging and code simplification techniques</li><li>• Investigated processor instruction set and datasheets to find optimal solution and reduce code complexity</li></ul>	Chicago, IL

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## PERSONAL

- Good at Communicating, Interacting in Team-based, Goal-driven environments
- Strong community outreach through Triangle Fraternity and Idea Shop
- Member: IEEE Eta Kappa Nu Honor Society, Solid State Circuits Society, Triangle Fraternity
- Passionate about Public Transportation and Developing Technologies
- Avid Runner and Proud finisher of Chicago Marathon (2019)