

## Education

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<b>BSc (Engineering)</b>	<b>University of Michigan</b>	<b>August 2020 – April 2023</b>
<ul style="list-style-type: none"><li>• Major: Computer Science</li><li>• 3.8/4.0 GPA</li><li>• Organizations: M-STEM Student Council Board, Michigan Data Science Team, Undergraduate Research Opportunity Program</li><li>• Coursework: Compilers, Computer Architecture, OS, ML, DS/Algorithms, CV, Web Systems</li></ul>		

## Experience

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<b>CS Research Fellow</b>	<b>Google</b>	<b>September 2022 – Present</b>
<ul style="list-style-type: none"><li>• Selected to join competitive 12 week research program by Google Computer Science Research Mentorship Program (CSRMP). I will work 1:1 with a Google mentor on Machine Learning and Compiler research.</li></ul>		
<b>AI Fellow</b>	<b>University of Michigan</b>	<b>August 2022 – Present</b>
<ul style="list-style-type: none"><li>• Accepted into fellowship where I am partaking in a project to fuse the basic safety messages (BSMs) from vehicles with bounding boxes from smart intersections in realtime to potentially reduce unimpaired crashes by 90%.</li><li>• Partnering with startup P3 Mobility to deploy our product in Ann Arbor intersections once it is finished.</li><li>• Partaking in Entrepreneurship courses with Ann Arbor startups and global treks with high-impact companies in NYC and Washington DC to discuss leveraging Entrepreneurship with AI.</li></ul>		
<b>Cybersecurity Intelligence Intern</b>	<b>Ford Motor Company</b>	<b>May 2022 – July 2022</b>
<ul style="list-style-type: none"><li>• Automated ThreatConnect tag and attribute source rename, merge, and deletion through Rest API calls and MySQL commands, providing Intelligence analysts valuable insight on detecting malicious campaigns.</li><li>• Validated 174 Indicators of Compromise to judge maliciousness of IPs, addresses, domains, URLs, and file hashes reported by the Detection team.</li><li>• Undertook the Intern City of Tomorrow project to design a way to improve mobility in urban environments using autonomous vehicles and advanced mobility technologies.</li></ul>		
<b>Software Engineer Intern</b>	<b>General Motors</b>	<b>June 2021 – August 2021</b>
<ul style="list-style-type: none"><li>• Optimized the OnStar Activity Map webapp, reducing vehicle emergency system access time from upwards of a few minutes to nearly instantaneous.</li><li>• Designed and created a user interface with Java and JavaScript to allow easier and more intuitive access of vehicle emergency systems. Leveraged Maven for backend build automation and WebLogic for webapp deployment.</li><li>• Migrated from using an RDD architecture for fault-tolerance in each data center for our Hadoop cluster to implementing direct HDFS replication, further securing GM data.</li></ul>		
<b>ML Researcher</b>	<b>University of Michigan</b>	<b>Sep. 2020 – April 2021</b>
<ul style="list-style-type: none"><li>• Reduced segmentation time from around 30 minutes per abdominal CT scan using previous technologies to under 5 minutes using Python's Sklearn ML framework and MATLAB for Image Processing.</li><li>• Achieved Dice-Sørensen Similarity Coefficient of 54% using U-NET Convolutional Neural Network.</li></ul>		

## Personal Projects

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- **Decaf Static Compiler** – Developed front-end and back-end compiler for toy C-like language, Decaf, using C++. Front-end compiled to TAC IR using Lex/Yacc. Back-end register allocation using Graph Coloring heuristic Chaitin's Algorithm and optimizations using Dead Code Elimination, Common Subexpression Elimination, Forward Copy Propagation.
  - **Linux Kernel** – Optimized open-source drivers and kernel modules. 7 pulled commits.
  - **Street Fighter II AI** – AI based on Deep Q Reinforcement Learning and Convolutional Neural Network that plays SNES game Street Fighter II. Written using Python frameworks PyTorch for RL and CNN and Gym Retro for emulation. Wins 88% of matches compared to a random model that wins 23% of matches.

## Skills

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- **Languages** – Python, C, C++, Java, JS, MATLAB
  - **Softwares** – LLVM, Lex/Yacc, PyTorch, Git, Bash, Linux, MySQL
  - **Certifications** – Scaled Agile Framework (SAFe) 5.0 Practitioner