

Noah T. Curran

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RESEARCH INTERESTS

My research interests lie in the realm of vehicular security. Currently, I am working on anomaly detection within the in-vehicle network. I also have interests in the security of autonomous vehicles.

EDUCATION

University of Michigan

Ann Arbor, MI

Ph.D. in Computer Science & Engineering

August 2020 – Present

Advisor: Prof. Kang Shin

Purdue University

West Lafayette, IN

B.S. in Computer Science with Honors

August 2017 – May 2020

Advisor: Prof. Yung-Hsiang Lu

B.S. in Mathematics

August 2017 – May 2020

EMPLOYMENT

Research Assistant, University of Michigan

Ann Arbor, MI

Real-Time Computing Lab

August 2020 – Present

PI: Prof. Kang Shin

- Anomaly detection from reported CAN-bus data through the utilization of a mobile phone's IMUs.

Undergraduate Research Assistant, Purdue University

West Lafayette, IN

Continuous Analysis of Many CAMeras

August 2018 – May 2020

PI: Prof. Yung-Hsiang Lu

- First research position—this group is where I learned the basic techniques of effective research and leadership.
- Determine effectiveness of code review within predominantly undergraduate research teams.
- Honors project for degree requirements completed in this group. This included the development of a tool that enabled developers to give more interactive bug reports during the GitHub code review process.

Xroads Systems Exploration Lab

May 2019 – May 2020

PI: Prof. Felix Lin

- Worked within this lab under summer and fall REU funding. The following spring was a volunteer position.

- Developed a partial JPEG decoding tool to enable research on secure tensor processing within edge devices with small memory.
- Presented the work on a secure tensor processor at the Secure and Trustworthy Cyberspace PI Meeting. I was granted a travel grant to showcase the work in the undergraduate track at this PI meeting.

Computation Intern, Lawrence Livermore National Lab

Livermore, CA

National Atmospheric Release Advisory Center (NARAC)

May 2018 – August 2018

- Worked on a front-end platform to enable atmospheric scientists at NARAC to calculate dispersion models for particles released into the atmosphere.
- Codebase was in the process of being modernized with newer web app technologies, such as Angular and Node.

PAPERS

1. Isha Ghodgaonkar, Abhinav Goel, Fischer Bordwell, Caleb Tung, Sara Aghajanzadeh, Noah Curran, Ryan Chen, Kaiwen Yu, Sneha Mahapatra, Vishnu Banna, Gore Kao, Kate Lee, Xiao Hu, Nick Eliopolous, Akhil Chinnakotla, Damini Rijhwani, Ashley Kim, Aditya Chakraborty, Mark Daniel Ward, Yung-Hsiang Lu, and George K. Thiruvathukal, “Observing Responses to the COVID-19 Pandemic Using Worldwide Network Cameras,” arXiv Preprint, May 2020.

HONORS & AWARDS

Undergraduate

Honors in Computer Science, Purdue University

May 2020

Outstanding Senior in Computer Science, Purdue University

April 2020

Secure & Trustworthy Cyberspace PI Meeting Travel Grant

October 2019

NSF REU, Purdue University

May 2019 – December 2020

Presidential Scholarship, Purdue University

August 2017 – May 2020