Christopher Vattheuer

Canadian Citizen

Education

PhD in Computer Science (In Progress), University of California, Los Angeles **Sept 2023-Sept 2028**
- Supervised by Professor Abari at the ICON Lab.

BSc Hons Co-op, Computer Science, University of Manitoba **Sept 2018-Apr 2023**
- Graduated with the highest standing in the Faculty of Science Honours BSc, GPA: 4.49/4.50

Publications

Vattheuer, C., J, Feng., H, Khalili., N, Sehatbakhsh., O, Abari.:XR Devices Send WiFi Packets When They Should Not: Cross-Building Keylogging Attacks via Non-Cooperative Wireless Sensing (Under Submission)

Lu H., **Vattheuer, C**., Mirzasoleiman, B., Abari, O.: NeWRF: A Deep Learning Framework for Wireless Radiation Field Reconstruction and Channel Prediction. In: Forty-first International Conference on Machine Learning (ICML) 2024

Vattheuer, C., C, Liu., A, Abedi., O, Abari.: Is Z-Wave Reliable for IoT Sensors?. In: Sensors Journal. IEEE. (2023)

Vattheuer, C., Baecker, A.N., Geiskkovitch, D.Y., Seo, S.H., Rea, D.J., Young, J.E.: Blind Trust: how making a device humanoid reduces the impact of functional errors on trust. In: International Conference on Social Robotics. Springer. (2020)

Awards

Department of Computer Science Graduate Award, University of California, Los Angeles **2023**

Faculty of Science Medal in B.Sc. (Honours), University of Manitoba **2023**

Undergraduate Research Fellowship Award, University of Waterloo **2021**

UMSU Undergraduate Research Award, University of Manitoba **2021**

Presidents Scholar Society, University of Manitoba **2018-2021**

Isbister Scholarship for Highest Standing in Faculty of Science, University of Manitoba **2020**

Work Experience

DeweyVision, *Machine Learning Engineer* **Oct 2022-Sept 2023**
- Led research exploring high speed and robust video fingerprinting algorithms to revolutionize video post-production.
- Implemented new AI technology with test driven development in C++, Rust, and Python.

Cisco Systems, *Technical Undergraduate Co-op* **Sept 2021-Dec 2021 and Jun 2022-Aug 2022**
- Worked directly under Cisco's Head of Responsible AI Research to aid in designing and creating an open-source tool, RAI, for assisting in multimodal Responsible AI development presented by Cisco's head of research at SIGCOMM 2022.
- Performed literature searches, created presentations, and programmed in Python with over 45k delta.
- Led work with a PhD student to add new visualization techniques to RAI.

Google, *Software Engineering Intern* **Jan 2022-Apr 2022**
- Worked on AI Retail Search Solutions within Google Cloud on a project which was a blocker for a public release.
- Used C++ along with several other languages to create internal tools for metric gathering and visualization.
- Created clear documentation and worked closely with several teams to provide guidance on removing a release blocker.

University of Waterloo - Internet of Things Lab, *Co-op Student* **Jan 2021-Apr 2021**
- Researched and developed a new attack on wireless security devices to increase their power consumption by 1500x to highlight problems with existing Z-Wave protocol, published in IEEE Sensors Journal.
- Collected and analyzed millions of datapoints to successfully infer information about Z-Wave protocol.

University of Manitoba - Computer Vision Lab, *Student Research Assistant* **May 2020-Aug 2020**
- Designed a state-of-the-art technique for the distillation of residual neural networks while maintaining high accuracy.
- Maintained rigorous logs on performance data which proved to be critical for the overall direction of the project.

University of Manitoba - HCI Lab, *Student Research Assistant* **May 2019-Dec 2019**
- Designed an experiment, in collaboration with graduate students and Dr. Young, investigating the impact of humanoid embodiments on trust, increasing transparency around humanoid agents.
- Published work in ICSR 2020.