Sierra Wyllie

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PROFESSIONAL SUMMARY

I am a third year engineering science student at the University of Toronto, and currently a member of the CleverHans Lab under Nicolas Papernot at University of Toronto and the Vector Institute. My research interests include fairness and security for trustworthy ML. I am a dual citizen of the **US and Canada** and willing to relocate or work remotely.

EDUCATION AND MEMBERSHIPS

University of Toronto
Toronto, ON
Bachelors of Applied Science
2020–2024 + Co-op Work year
Machine Intelligence Major
GPA: 3.64/4

Vector Institute
CleverHans Lab
National Center for Women in IT (USA)

SKILLS

- **Software:** ARM Assembly, C, Python (scikit–learn, PyTorch) Java, Matlab, Mathematica, Bash, Unix, LaTeX, git, machine learning, deep learning
- **Hardware:** Raspberry Pi, NVIDIA Jetson, soldering
- **Professional:** Creative problem solving, team work and management, communications, policy analysis, visualisation

WORK EXPERIENCE

Research Intern
University of Toronto, Vector Institute
May 2021 – Present

Investigating fairness in machine learning, mentored by Prof. Nicolas Papernot in the CleverHans lab.

Summer Intern
OECD AI Policy Observatory
June – August 2022
Paris, France (Remote)

Worked as a technical intern with the **OECD Expert Group on AI Compute and Climate** with world leaders in AI, AI compute, and national policy. Developed frameworks and communications tools to accurately explain importance of AI compute in national development.

Electrical and Software Intern
Space Tango
June – August 2020
Lexington KY, USA

Assembled electrical components currently aboard the **International Space Station** for client R&D projects. Introduced artificially intelligent and autonomous solutions including UIs, fluid detection and direction tracking, and phase microscopy.

Research Student
Western Kentucky University
January 2018 – May 2020
Bowling Green KY, USA

Built intrusion detection system for drones using ML. Presented at regional conferences, such as ACM Mid-Southeast, and won best undergraduate poster. Also conducted a survey of metaheuristics for load balancing in WKU Cloud Lab's Bioinformatics Cloud. Presented at WKU Student Reach Conference in March 2019.

SELECTED RECOGNITIONS AND PUBLICATIONS

- **Publications:**
  - A. Shahin Shamsabadi, M. Yaghini, N. Dullerud, S. Wyllie, U. A ïvodji, A. Alaagib, S. Gambs, and N. Papernot, "Washing the unwashable : On the (im)possibility of fair-washing detection," in The Thirty-Sixth Conference on Neural Information Processing Systems (NeurIPS), New Orleans, Louisiana, USA, 2022.
  - A. White, P. O'Boyle, S. Wyllie, and M. Galloway, "The Impact of DDoS Attacks on Application Containers, System Containers, and Virtual Machines," in 17th International Conference on Information Technology–New Generations (ITNG 2020).
- **Grant 2021:** ESROP Grant from Engineering Science at University of Toronto for fairness in ML research. ($6,000 CAD)
- **National Honourable Mention 2020** for aspirations in computing from the National Center for Women in IT.