E. ADAM PAYZANT

Software Developer and Computer Scientist

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EDUCATION

Bachelor of Computer Science

Carleton University

📅 September 2017 – June 2021

EXPERIENCE

Software Engineer

Cisco Systems

📅 May 2021 – Present   📍 Ottawa, Ontario, Canada

- Worked on the Switch Integrated Security Feature (SISF) team developing a distributed network security feature to glean addresses and detect rogue devices in both IPv4 and IPv6
- Wrote black box regression suites by sending generated traffic through network switches and validating behavior on the box and configured them to run nightly
- Read IPV4 and v6 RFCs. Read and reviewed both internal document for support teams and external documentation for customers
- Worked in C for the Switch software and white box testing and Python for the black box testing

Director of Academics

Carleton Computer Science Society

📅 May 2019 – Apr 2020   📍 Ottawa, Ontario, Canada

- Prepared various talks such as a guide to developing personal projects, an introduction to machine learning, and in-depth Linux usage
- Organized larger events such as a 36 hour game jam, an event where participant teams have 36 hours to develop a video game

HERE Internship
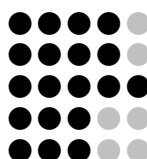
Oak Ridge National Laboratory

📅 May 2018 – Aug 2018   📍 Oak Ridge, Tennessee, USA

- Developed research software to analyze high temperature alloy corrosion patterns using Python and common libraries such as Numpy, SciPy, and Matplotlib for parameter optimization

PROGRAMMING LANGUAGES

C
C++
Python
Go
Rust

Note: This is ranked based on my confidence to work in a codebase using the given language

ADDITIONAL SKILLS

- Database management techniques in both SQL and NoSQL systems
- Development tools such as git, gdb, valgrind
- Developing for and working in Linux (Arch and Debian families) and Mac OS
- Optimizing code using parallelization and concurrency, memory management, and efficient data structures
- Developing in a team using design patterns and system decompositions while following an Agile workflow
- Clean code and documentation practices
- Designing a secure system and analyzing for vulnerabilities
- Distributed computing with Remote Procedure Calls (RPC)
- Machine learning theory (Linear Regression, Decision Trees, Q-Learning, Neural Networks) and implementation technologies (Keras, TensorFlow, scikit-learn)
- Computer vision using OpenCV

INTERESTS

- AI and Machine Learning
- Computer vision
- System and Network Security
- Networking and distributed computing
- Embedded programming

PROJECTS

doit_rs (in progress)

- A simple privilege escalation tool application (like sudo) written in Rust, supporting both shadow and PAM (via FFI) authentication.

UMLify

- A smaller program that, when passed a C++ project folder, will develop a UML class diagram and convert the header files into the diagram while still preserving functionality

SCAPES

- Worked in a team of four to develop a reduced instruction Assembly-like programming language and an IDE