Alexander Parent — Computer Science (Co-op)

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Education

- **University of Guelph** — Guelph, Ontario
  Computer Science (Co-op) (CS:C) Math Minor; GPA: 3.7 — 82% — *Sept. 2016 – Present*
  - **Ninjutsu**: Martial Arts Club — September 2017 - Present — Club President
  - **Iaido, Jodo**: Japanese Sword Club — Summer 2019 - Present
  - **Formula SAE**: Gryphon Racing — September 2017 - December 2017 — Electrical Team

Experience

- **eSentire** — Waterloo, ON
  Software Developer, Advanced Threat Analytics Team (Co-op) — *May 2019 - Aug 2019*
  - **Kafka Streams**: Kafka Streams is a client library for building applications and microservices, where the input and output data are stored in Kafka clusters. We used Kafka Streams to move large volumes of data and transform it.
  - **Scala**: Scala, specifically the Scalazzi dialect. Functional programming using the ZIO (effect library) and scalaz.
  - **Extensive Unit Tests**: 100% Test Coverage was necessary in all applications. This ensured code functioned properly, and made debugging easy.
  - **Kubernetes**: Kubernetes is an open-source container-orchestration system. Jenkins was used to deploy into the Kubernetes cluster. Manifests were generated using NIX.
- **Focus21** — Kitchener, ON
  Full Stack Developer (Co-op) — *May 2018 - December 2018*
  - **ApostropheCMS**: ApostropheCMS is an open-source Node.js CMS for enterprises. Developed an ecommerce website allowing employers to schedule and pay for training sessions, as well as view and purchase resources
  - **ES6**: Worked with ES6 to develop modules such as the course registration module, and create pages for the Blended, eLearning, and Webinar course pages.
  - **Live Site**: https://www.pshsa.ca/

Events Attended

- **MHacks X - 2017 - Michigan Hackathon**: Created steganography software to transfer data encrypted in images between users. Submitted write-up of project to MHL and won $10,000 USD to attend any conference of choice. Node.js and Socket.io was used to create this project.
- **CSGames - 2018 - Quebec City, Quebec CTF**: Worked to solve multiple challenges involving reverse engineering, cryptography, and software development
- **35C3 - 2018 - Leipzig, Germany Conference**: Attended on scholarship from MHL. Attended lectures about ROP attacks, Bluetooth exploits, weird Linux kernel problems, North Korean malware defenders and more
- **CSGames - 2019 - Montreal, Quebec CTF**: Worked with team to find CTF flags, solve hardware challenges, and reverse engineer executables

Projects

- **Guelph Course Scheduler**: Open source course scheduling program designed to work with the University of Guelph. Created with Node.js, C++ for the schedule generation and Python for course data scraping. Used by over 1500 people, or around 20% of Undergraduates. Live at https://guelph.scheduler.online
- **Text Game Engine**: Open source text game engine. Games are made using a format I created, allowing for loops, variables, and conditional statements. Parsed with C++. Live at http://textgame.aceparent.me
- **Monte Carlo Tree**: Open source algorithm for finding optimal combinations of groups given restrictions. Created to replace the brute force schedule creation algorithm being used with my course scheduler.

Technical Knowledge

C, C++	Scala	Docker	Javascript, Node.js
Java	Kafka Streams	Python	React.js
68k, x86, Arm Assembly	Kubernetes	Golang	Vim