


EDWARD BURNS


Management Engineering student

 edburns@uwaterloo.ca

 613-315-3015

 EdwardBurns10

 Personal website

 My LinkedIn

EXPERIENCE

Full Stack Software Developer, Red Canari Sept – Dec 2020

- Developed a proprietary **ReactJS** web application to manage, process and display user data. Established user authentication with **Amazon Cognito**.
- Stored data in an **Amazon DynamoDB** table and communicated to the frontend through an API using **Amazon API Gateway** and **AWS Lambda**.
- Built a Chrome-Extension version of the app for more accessibility.
- Created a server with Traefik proxy, Docker and Flask to authenticate Microsoft user JSON Web Tokens.
- Participated in national pentesting competition for Red Canari.

Cyber Security Analyst, Bank of Canada Jan – Apr 2020

- Researched and identified the leading dangerous and relevant global Advanced Persistent Threat groups. Analysed capabilities of threat actors and attack vectors to identify potential vulnerabilities.
- Wrote and modified python scripts to improve opensource software.
- Wrote programs using VBA and macros to optimize the filtering process of excel files containing 750,000+ security vulnerability logs.
- Specified and procured virtual machines in Azure, then installed and tested opensource software in a Red Hat Linux VM environment.

Data Process Engineer, Statistics Canada May – Aug 2019

- Worked to modernize data production and verification practices in order to streamline operations, standardize and automate processes.
- Manipulated, dissected, verified, analyzed & interpreted financial data. Constructed statistical data tables and graphs, prepared written analyses, presented results and made recommendations.
- Used Microsoft Excel at an advanced level (using Visual Basic for Applications, pivot tables, macros and complex formulas).

Research Co-Lead, Waterloo Design Team – Industry 4.0 (2018–2019)

Lifeguard/ Swim Instructor, City of Ottawa 2016 – 18

EDUCATION

Management Engineering Co-op (3A) University of Waterloo (2018 – 2023)

Using mathematical models, data and software to design, optimize and improve information systems.

PROJECTS

20 Questions Game

- This app implements a yes/no guessing game written in **Java**.
- Accepts a question and answer .txt files in the form of binary trees, and attempts to guess the user's object.
- If player wins, the object is added to the tree, which is printed as a .txt file following a depth-first-traversal.

Personal Website

- Personal website designed to display portfolio and highlight abilities using **CSS** and **ReactJS**.
- Used **MaterialUI** for the core framework to create a more responsive design.

Image Classification Algorithm

- Used **TensorFlow**, **Keras**, and **CNN** to develop a machine learning algorithm that achieved 90% accuracy.

SKILLS

Programming

Python Ruby Java Bash
JavaScript SQL VBA

Tools & Technologies

HTML 5 CSS 3 Git
Bootstrap 4 MySQL Rails
React/Redux AWS Node
DynamoDB TensorFlow

ACTIVITIES & INTERESTS

- Technology (CES 2021), pentesting, hackathons (Hackfest, Hack-the-North)
- Competitive soccer for Ottawa City, varsity soccer team captain, provincial futsal finalists.