

## Education

Master of Engineering in Electrical and Computer Engineering, University of Waterloo, Canada	09/2022 – 01/2024
Honours Bachelor of Computer Science (Co-op), Dalhousie University, Canada	09/2014 - 09/2019
<ul style="list-style-type: none"><li>• <b>Academic Accolades:</b> Dean's Honour List</li><li>• <b>Thesis:</b><ul style="list-style-type: none"><li>- From theory to practice: insights and hurdles in collecting social media data for social science research 05/2024</li><li>- On the Accuracy &amp; Complexity of Spam User Detection Algorithms for Social Networks 09/2019</li></ul></li></ul>	

### Relevant Coursework:

- Methods and Tools for Software Engineering (A+)
- Systems Theory, Models, Research & Design (A+)
- Objective Orientation & Generic Programming with C++ (A-)
- Advanced Database Systems (A+)
- Process of Data Science (A+)
- Network Computing (A-)
- Software Engineering (A)

## Skills

- **Software Proficiencies** | RESTful API, Git, Vim, MySQL, MongoDB, Django, Netflix Zuul, React & Redux, Docker & Kubernetes, Android Studio, Kafka, Redis, AWS Cloud, IBM DB2
- **Programming Languages** | Java, C++, Python, JavaScript
- **Analysis Skills** | Web Analytics, Software Testing, Software Validation, Data Storage & Data Retrieval
- **Qualitative Skills** | Communication, Leadership & Cross-Cultural Awareness

## Professional Experience

Cloud Microservices Application Developer	09/2019 - 09/2022
IBM – Bedford, NS, Canada	

- Implemented back-end rule engine to build solutions for different types of banking business complications
- Managed and developed RESTful APIs containing swagger-based interface for more than 8 services throughout duration of project
- Applied Redux Middleware in web application to retrieve data and integrate between server and client sides
- Led API lifecycle development, managing software development while ensuring functionality of code
- Gained extensive knowledge in software such as Java Spring Boot, Kubernetes, Netflix Zuul, React and Redux

Web Developer [Co-op]	01/2019 - 04/2019
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The Chronicle Herald – Halifax, NS, Canada

- Skillfully leveraged technical proficiency in Technical Stack including Python, Django, RESTful API, Git and Agile
- Operated alongside product owner to gather additional information on business and functional requirements; wrote high quality technical documentation for better code maintenance and internal training
- Designed and developed backend RESTful API based on Django framework, utilizing pair programming approach to ensure high quality code
- Implemented unit and integration testing suites to assess product functionality and performance

Junior Data Analyst [Co-op]	09/2018 - 12/2018
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The Chronicle Herald – Halifax, NS, Canada

- Expertly debugged existing ETL processes and facilitated performance tuning to fix bugs
- Developed new ETL Pipelines to extract data from various sources, transforming and preparing data for analytical purpose; generated actionable insights using extracted and transformed data
- Utilized Cron jobs to automate data file tracking processes; gained extensive experience in MySQL, Oracle, Python & Git

Junior Web Developer [Co-op]	04/2017 - 08/2017
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## SimplyCast – Dartmouth, NS, Canada

- Employed proficiency in Technical Stack including JavaScript, PHP, HTML, CSS, Git and Agile
- Led and took ownership of all coding, testing and collaboration initiatives; gained knowledge of agile methodologies within software development processes
- Effectively tested software to ensure functionality and adherence to plan objectives, as well as management expectations
- Contributed to team solutions to complete stories and meet goals, exceeding client expectations and providing exceptional service

## Projects

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### SAT Solver Development

01/2023

*Technologies used: BCP, DPLL Algorithm, Tseitin's Transformation*

- **Developed the SAT solver** to assess whether input logical formulas are satisfiable (SAT) or unsatisfiable (UNSAT), enhancing the efficiency of logical computations in applications.
- **Implemented the basic DPLL (Davis–Putnam–Logemann–Loveland)** algorithm integrated with Boolean Constraint Propagation (BCP), demonstrating adeptness in algorithm optimization and advanced computational techniques.
- Utilized Tseitin's transformation **to convert original non-CNF formulas into equisatisfiable CNF formulas, streamlining the SAT solving process and improving formula evaluation accuracy.**

### Dynamic Hand Gestures Recognition

04/2023

*Technologies used: Deep Neural Networks, PyTorch*

- **Authored a comprehensive review paper** on the use of deep neural networks for dynamic hand gesture recognition, advancing the understanding of machine learning applications in human-computer interaction.
- **Explored various CNN architectures** including 3DCNN, lightweight CNN, and fine-tuned CNN, as well as LSTM and RNN, to assess their effectiveness and efficiency in gesture recognition.
- **Identified critical gaps** in existing methods, highlighting issues related to data availability and quality, computational resources, transferability, and real-time processing capabilities. This analysis directs future research towards practical, scalable solutions for real-world applications.

## Certifications

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**Machine Learning with Python Certificate** - IBM, 2021

**AWS Machine Learning Specialty Certificate** - Amazon Web Services, 2021

**AWS Certified Cloud Practitioner Certificate** - Amazon Web Services, 2020

**SAFe® 5.1 Scrum Master Certification (SSM)** - Knowledge Hut, 2020

**Applied Data Science with Python Level 2 Certificate** - IBM, 2020

**IBM Garage Methodology Explorer Certificate** - IBM, 2020

**Data Science Foundations Level 2 Certificate** - IBM, 2020

**Big Data Foundations Level 1 Certificate** - IBM, 2020

## Extracurricular Involvements

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**Business Analyst - Work Placement Education Program Experience with Amazon**, 2021

**Coach - Halifax Innovation Challenge**, 2021

**Teaching Assistant - Java Programming Language**, 2019

**Teaching Assistant - Data Mining & Warehousing**, 2019

**Completed Sandbox Discovery Program in Dalhousie University ShiftKey Labs**, 2018

**Participated Game Jam Hackathon in Dalhousie**, 2017