**EDUCATION, LANGUGES AND SKILLS**

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| **Wilfrid Laurier University** – Waterloo, ON | *September 2021 – April 2025* |

Honours Bachelor of Science (Computer Science) with Mathematics and Environmental Studies Minors

Languages: C, C#, Python, VBA, SQL Variants, DAX, PowerBI and Java

Skills: Agile Software Development, Blender, CAD, AWS Cloud Practitioner, Database Management, PowerBI

**WORK EXPERIENCE**

**Data Analyst – LifeLearn Animal Health, ProSites,** *Guelph, Ontario*     *June 2024 – December 2024*

* Applied Machine Learning/AI Recognition to profile customers improving the companies understanding on product usage across the customer base.
* Designed and implemented a convolutional neural network to analyze web traffic trends and identify bot data within Google Analytics and Matomo.
* Developed Power BI dashboards with integrated distribution models based on company needs and real-life trends, providing actionable insights and supporting data-driven recommendations.

**Logistics Coordinator – HawkHacks/Konfer,** *Waterloo, Ontario* *Sep 2023 – May 2024*

* Supported one of Canada’s largest hackathons, with 900+ participants, 35+ sponsors, 30+ speakers, and $240k in combined cash and object prizes.
* Collaborated with the team to identify event requirements and manage logistics, including venue booking, catering, and food competitions ensuring smooth planning, implementation, and high-quality participant experience.
* Built and maintained relationships with external vendors to secure cost-effective, high-quality services for event execution.

**Instructional Assistant– Wilfrid Laurier University,** *Waterloo, Ontario*     *January 2024 – April 2024*

* Conducting lab sessions, answering student questions, and providing additional support to help students grasp complex concepts in the CP216 Introduction to Microprocessors course.
* Assisting in the grading process for labs by providing constructive feedback to aid academic development and collaborating with the Professor in a professional manner.

**Emergency Instructor - Brant Haldimand Norfolk Catholic School Board,** *Brantford, Ontario*     *May 2022 – June 2022*

* Short term temporary contract.
* Managed elementary school classes by teaching lessons based on curriculum standards to support continuous learning.
* Analyzed student achievement and prepared lesson plans to optimize student progress while maintaining accurate performance records.

**Inclusion Specialist and Senior Counsellor - YMCA Wanakita,** *Haliburton, Ontario* *June 2021 – August 2022*

* Provided care and companionship for special needs campers by leading activities, assisting with mealtime, and aiding with hygiene routines.
* Applied Agile thinking principles to adapt to challenges on various wilderness out trips by testing new canoeing routes and keeping track of previous mapping errors.
* Utilized problem-solving skills by becoming familiar with specific needs of campers to adjust services to support campers.

**PROJECTS**

**Data Mining Projects (Data Analysis/Data Cleaning/Big Data)**

*Languages and Frameworks: Python, Jupyter Notebook, Scikit-Learn, TensorFlow, NetworkX, Keras… etc*

* BERT/LLM’s, Tokenization, Stop Word Removal/Data Cleaning, Similarity Models, Pagerank.
* Developed a custom PageRank algorithm to evaluate the relative importance of web pages within a network, effectively addressing issues such as dead ends and spider traps.
* Designed and implemented a Large Language Model to analyze similarities between scientific paper titles and abstracts, enabling the clustering of research into thematic groups and revealing potential interdisciplinary opportunities for innovation.

**Machine Learning Algorithms (Data Analysis/Data Cleaning)**

*Languages and Frameworks: Python, Jupyter Notebook, Scikit-Learn, TensorFlow, Keras*

* K-NN, Linear Regressor, Neural Networks (Convolutional), Decision Tree Classification.
* Engineered machine learning models leveraging the MNIST Database as well as the Scikit-Learn library to classify authentic and fraudulent spam emails. Developed algorithms for digit recognition in images with a 98% accuracy.

**AI Algorithms (Puzzle Solving / Solution Based)**

*Languages and Frameworks: Python, Jupyter Notebook, C Programming*

* Built an A\* algorithm for solving the 8/15-puzzle’s by conducting a comparative analysis of heuristics.
* Created an AC-3 (Arc Consistency) algorithm built with backtracking to solve any 9x9 sudoku puzzle.
* Produced a N-Queens Constraint Satisfaction Problem Algorithm that can find the greatest number of queens to fill a 2 million x 2 million chess board so that they will not be able to attack each other based on classic chess rules.

**Database Management System**

*Languages and Frameworks: SQL, MySQL Workbench, Java*

* Developed a Database Management System using primary key, foreign key relationships in MYSQL Workbench based on an initial ER diagram while reducing redundancy and increasing optimization of the system using normalization techniques.

**Block Cube Computer Game**

*Languages and Frameworks: Unity, C#, Visual Studio Code, Blender, Github*

* Outlined a project plan for a runner style game by considering stakeholder requirements, developing UML diagrams and Gantt charts to remain organized and dealing with merge conflicts.
* Outlined a project plan by developing UML diagrams while evaluating prototypes by implementing user feedback, developing test suites, and debugging errors to optimize performance and ensure stakeholder requirements are met.

**AWS Hosted E-Commerce Website**

*Languages and Frameworks: AWS EC2, WordPress*

* Initialized an EC2 instance using Free Tier Services on the AWS Platform combined with a WordPress AMI.
* Created an E-Commerce website for a Business "Blackridge Camping Company" on WordPress while leveraging UX Design principles, SEO, and digital/content marketing trends.