

EDUCATION

University of Manitoba

Bachelor of Science in Computer Science

Dean's Honours List: 2019 and 2020

Undergraduate Student Academic Scholarship: 2020, 2021 and 2022

Winnipeg, MB

Sep. 2019 – Dec. 2023

CERTIFICATIONS

Amazon Web Services Cloud Practitioner – AWS

Full Stack Web Development BootCamp – Udemy

WORK EXPERIENCE

Manitoba Government – *Data Analyst Internship*

Winnipeg, MB

- Enhanced Winnipeg's school dataset accuracy by 95% through cleansing and conversion to a new XSD schema, maintaining compliance with educational data standards.
- Improved data processing efficiency and reliability by 30% using Python, Visual Studio Code, and MS SQL Server for dataset integration.
- Increased data analysis proficiency by 40%, focusing on accurate and actionable public sector data analysis through continuous learning.

Wawanesa Insurance – *Administrative Assistant*

Winnipeg, MB

- Managed 15 daily policy records, ensuring accuracy and resolving discrepancies with strong problem-solving skills.
- Coordinated mail for 25 employees, achieving a 98% delivery rate and excelling in stakeholder communication.
- Supported 400+ policyholders monthly, processing payments and inquiries with a 95% satisfaction rate.
- Prioritized and multitasked across tasks using JIRA, successfully managing work priorities and team performance.

University of Manitoba – *Undergraduate Research Assistant*

Winnipeg, MB

- Developed a new theorem in computational mathematics to approximate orthogonal polynomial values.
- Used Python and Cocalc to generate and analyze data, staying current with industry trends.
- Delivered a professional presentation at an academic conference, highlighting theorem applications.
- Documented research findings and algorithms, enhancing reproducibility and supporting further research.

PERSONAL PROJECTS: (LINKS OF THESE PROJECTS AND MANY MORE ON GITHUB)

Full Stack Chat Application | *Web-Sockets, React, JS, Node, Express*

Winter 2024

- Developed a full-stack chat application enabling real-time messaging among users, using React.js for the frontend and Node.js with Express for the backend.
- Integrated WebSockets for an instant, bidirectional communication, allowing all connected users to exchange messages in real-time.
- Employed Bootstrap for responsive design, ensuring a seamless and engaging user experience across various devices.
- Implemented PostgreSQL for robust data storage, reliably saving chat messages and user information for persistence and retrieval.

Job Queuing System | *Python, Sockets (TCP, UDP)*

Winter 2023

- Developed a Python message queuing system project with the client, work queue, and worker components using sockets and select for efficient communication. The client can add jobs to the queue and the server assigns jobs to the available worker.
- Implemented message types for job submission and status checking, and used messaging strategies to solve communication problems between components.
- Utilized TCP sockets for communication between the client and work queue, and between the work queue and workers.
- Designed the worker component to run as a daemon and print text to a UDP socket at a rate of one word every 0.25 seconds, with logging using Syslog.

Student Management Desktop Application | *Python, Tkinter, MySQL*

Fall 2022

- Developed a robust Student Management Application using Python and Tkinter, leveraging MySQL to perform CRUD operations on the database and enabling the seamless search of students based on multiple parameters.
- Showcased proficiency in database management, user interface design, and backend development, while implementing best practices in software development and adhering to project timelines.
- Utilized technical skills including Python, Tkinter, and MySQL to create an intuitive and user-friendly application that streamlined student data management, showcasing experience in software development.

ASP.NET Web Application for Chinook Database | *C#, MS SQL Server* | *Team Project* **Winter 2023**

- Collaborated with a team of three developers to create a user-friendly web application using ASP.NET and C# to provide a powerful tool for accessing and analyzing a complex database.
- Developed complex queries to retrieve data from an MS SQL Server database containing information about a company's sales and inventory.
- Designed and implemented both front-end and back-end features, including, data visualization, and custom controls.
- Utilized Agile methodologies to ensure timely delivery of project milestones and effective communication with team members.

Restaurant Kitchen Simulation | *C++*

Winter 2022

- Built an event-driven simulation which can be used by restaurant chef to handle food orders using C++
- Developed three different simulations:
 1. First come first served (FCFS): orders are served based on the order of arrival, as long as they are not expired
 2. Last come first served (LCFS): the most recent order is served first, regardless of its expiration time
 3. Maximize revenue: the chef prioritizes unexpired orders with the highest cost
- Implemented data structures such as queues, stacks and priority queues to optimize the simulations
- Conducted extensive testing and debugging to ensure accurate simulation results

Weather Application | *Weather API, HTML, CSS, React, Bootstrap, JavaScript*

Fall 2022

- Developed a single page React-Bootstrap weather application by using an API called Weather.com API
- Demonstrated proficiency in front-end and back-end web development, utilizing technical skills including HTML, CSS, React, and Bootstrap to create an intuitive user interface and responsive design.
- Restructured the API information to use the forecast for the next two days, showcasing database design and development skills.

VOLUNTEER WORK

University of Manitoba – International Student Orientation Ambassador

2020, 2021

REFERENCE

Catherine Romero – Manager at Manitoba Government

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