

Laurence Lu

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EDUCATION

Bachelor of Science, Honors Specialization in Computer Science

2020 – 2024, London, ON

Western University

- Western Scholarship of Distinction for Entrance Average of 93% (2020).
- Relevant Coursework: Algorithms, Data Structures, Computer Networks, Artificial Intelligence, Project Management.

International Baccalaureate Diploma

2020, Mississauga, ON

Glenforest Secondary School

WORK EXPERIENCE

Research Assistant

May 2021 – Nov 2023, London, ON

Western University, Lawson Health Research Institute

- Under Prof. Sanjay Kharche, researched MRA-imaged brain connectivity structures from BraVa database.
- Identified carotid inlets, bifurcation points, and brain-aorta connections with MATLAB and ParaView to develop models capable of CFD simulations.
- Conducted CFD simulations using PM³-SimVascular software to analyze pressure, Reynolds numbers, and wall shear stress.
- Presented research at the 2021 PM³ workshop, highlighting applications in cerebrovascular disorder study and treatment evaluation.

Grocery Associate

July 2020 – November 2020, Mississauga, ON

T&T Supermarket

- Restocked products, cleaned shelves, and maintained store organization to enhance customer experience.
- Conducted inventory checks and facilitated online grocery orders for curbside delivery service.
- Enforced COVID-19 health protocols, including mask-wearing and regular sanitization, ensuring a safe environment for all.

PROJECTS

Parking Space Detection System Using Computer Vision, 5G, Edge, and Cloud Computing:

- Developed a parking management system integrating computer vision, 5G, edge computing, and cloud technologies to gather and present real-time parking spot availability data from parking lot surveillance video.
- Demonstrated the potential for cost-efficient, scalable solutions in smart urban mobility.

Hockey Score Application:

- Allow users to view past, current, and upcoming game scores, team schedules, league standings, player stats, and betting odds.
- Developed using C++. Fetched and parsed data from NHL API to present information in a user-friendly interface

Spell Checker Application:

- Developed a Java program to identify misspellings, miscapitalizations, and double words from a user given text file
- Compared words to a known dictionary, and underlined incorrect words, which provide a list of possible corrections

Peer-to-Peer Distributed File Storage System:

- Developed a Python program that allows a user to upload/store and retrieve files using a peer-to-peer distributed file system
- Split files into segments for encryption and distribution among network nodes via FTP/FTPS.
- Utilized Kademlia DHT for file management, with gRPC primary/backup model for server communication and health monitoring.

INVOLVEMENT

- **Google Developer Student Club** → Participated in Compose Camp workshop to learn how to build apps and user interfaces on Android using Jetpack Compose. Also learned introductory concepts in Kotlin and used Android Studio to develop Android app code.
- **Western Cyber Society, Western Soccer Association**

SUMMARY OF QUALIFICATIONS

Fields of Interest: Data Science and Big Data Analytics, Artificial Intelligence, Software Engineering

Technical Skills: C, C++, Python, Java, R, SQL, PHP, JIRA, gRPC, Git, Microsoft Office, Confluence, JIRA.

Experience in retail and wet lab environments, National Lifeguard Qualification, and fluent in Mandarin.