

Evelyn Yang

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Education Background

PhD - Degree in Process McKelvey School of Engineering - WUSTL	Start September 2023
Master of Science - Degree in Process School of Computer Science, Carleton University Supervised by Prof. Anil Somayaji	September 2021 Ottawa ON, Canada cGPA: 12 / 12
Bachelor of Science School of Computer Science, Carleton University Graduate with High Distinction Honours Thesis Supervised by Prof. Anil Somayaji	January 2018 - April 2021 Ottawa ON, Canada cGPA: 11.43 / 12

Honours and Awards

Honours

Graduate with High Distinction	2022
Deans' Honour List	2019 ~ 2022
Member of GoldenKey Honour Society	2018 ~ 2022
Chalmers Jack Mackenzie Scholarship	2021 ~ 2022
Departmental Scholarship	2021 ~ 2022
Michael Oliver Scholarship	2020 ~ 2021

Awards

TRUE SPORT SPORTSMANSHIP AWARD

I have won "TRUE SPORT SPORTSMANSHIP AWARD" in Ottawa for "always puts others first and demonstrates a positive attitude on and off the court regardless of the outcome of the game".

Research & Teaching Experiences

Research Assistant

Mount Sinai Hospital Lunenfeld Research Institute	April 2022 ~ Present
❖ Work with Prof. Laurent Briollais in research on "A Novel Gene-Based Test for Sequencing Studies Based on a Bayesian Variable Selection of Rare Variants".	
Civil and Environmental Engineering, Carleton University	Fall 2021
❖ Work with Prof. Karim Ismail in research on improving road safety by analyzing road monitoring videos.	
CISL, School of Computer Science, Carleton University	Summer 2021
❖ Work with Prof. Anil Somayaji in primary research on various computer security topics.	

Papers & Thesis

Finding Zipf's Law in the Frequency of the Software Repositories' Tokenized Commits Using Clustering Tree	MSR, 2023
❖ First author of the paper, preparing for submission in February 2023 for 20 th International Conference on Mining Software Repositories	
Knowledge Reuse Dynamics in Computer Security	NSPW, June 2022
❖ Second author of the paper, preparing for submit	
Modeling Attackers' Effort	BSc, April 2021

- ❖ The objective of my project is to research on concrete example(s) of attacks, and develop a mathematical attack-specific model or attack-type-specific model for attacker's effort.

Research Project

Natural Language Processing	Fall 2022
❖ Research on Multi-lingual text similarity with Universal Sentence Encoding	
Big Data Management - A Study of Cleaning Web Tables Using Baran	Winter 2022
❖ Research on how Baran system used for correcting real web table data	
Multi-Agent System and Game Theory	Fall 2021
❖ Analyze the data from Wimbledon tennis game using game theory	

Teaching Assistant

Operating System (COMP3000)	Fall 2022
Introduction to Software Engineering (COMP2404)	Winter 2022
Topics in Artificial Intelligence (COMP 4106)	Fall 2021
Programming Paradigms (COMP 3007)	Winter 2021
Abstract Data Types / Algorithms (COMP 2402)	Fall 2020

Leadership

Canada's Cyber Security Challenge	Fall 2022
Organize Canada's Cyber Security Challenge held in Carleton University, from player registration to prize ceremony as well as sponsor interview affair.	
Study Group Manager	Fall 2020
Supervise first-year undergraduates' study groups, and help them preparing for future study by addressing their academic concerns and bridging their gaps in study habits, study methods and time management skills.	

Projects Selected

Machine Learning Project - Python	August 2021
Analyze emails using data-value pyramid (Records, Charts, Reports, Predictions, and Actions) including functions such as collect the data, visualization of the data using charts, make predictions and suggest future actions.	
Artificial Intelligence Project - Python	July 2021
Design and implement Game of Gogang (Five in a Row) including functions such as select suitable algorithms, design the game rules, and implement a 15 x 15 game board user interface that allows player to play against "Computer AI" in alternate turns until the game ends.	
Traffic Control Management Project - C++ and OpenCV	June 2021
Detect traffic including functions such as average movement of vehicles and percentage of areas covered by vehicles, analyzes the information and make decisions in order to reduce traffic congestion.	
Helicopter Game - C++ with SDL	May 2021
Implement functions such as main menu with options of sound on/off, high scores, instructions and start/quit, use SDL graphics and sound for user interface that allows player to control the helicopter with UP/DOWN arrow in order to avoid obstacles on the screen until it collides with an obstacle.	
Database Application for an Online Bookstore - Python	December 2020
Frontend: Flask + HTML + JavaScript + CSS; Backend business: Python; Database: MySQL.	
1) Allow users to search the bookstore in different ways, view detailed book information, add books into the cart and checkout to buy the selected books, 2) Allow owners to access the inventory, view detailed sales reports including sales per genres, sales vs. expenditures, etc, 3) Allow all users to place and track shipping orders.	
Mobile Personal Budgets Manager - Java with Android	July 2020
Allow users to manage their personal budgets, set budget low notifications, and monthly/yearly report on user expenses.	

Student Management System - C++

June 2020

Design and implement user registration and login, edit and query basic information, UI for uploading, and etc.

Grocery Inventory System - Java

May 2020

Allow staffs to access data by their rights, design and develop UI, keep track of daily operations, and etc.

Curriculum Summary

Master Courses

Big Data	Trends in Big Data Management
Artificial Intelligence	Statistical and Syntactic Pattern Recognition, Multi-Agent Systems, Natural Language Processing

Bachelor Courses

Statistics	Introduction to Statistics Modelling II, and Probability & Statistics
Software & Application	Object-Oriented Software Engineering, and Fundamentals of Web Applications
Structure & Algorithm	Discrete Structures I & II, Abstract Data Types / Algorithms, and Design & Analysis of algorithms I
Artificial Intelligence	Topics in Artificial Intelligence
Security	Applied Cryptography
System Platform	Operating Systems, Database Management Systems, Principles of Computer Network, and Distributed Computing
Logic	Introduction to Symbolic Logic, Critical Thinking

Internship Experience

Chelsea98 Finance

Summer 2019

Design and implement company website, organize and document related education materials

ICBC, Industrial and Commercial Bank of China

Summer 2018

Add the bilingual frame, optimize UI, analyze log files and report, and draft the user manual, etc.

Hobby & Specialty

Volleyball

I used to be a member of Varsity Volleyball Team.

Languages

Bilingual proficiency in English and Chinese.