Paarth Kashyap

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Education

University of Toronto Toronto, ON

Bachelor of Applied Science, Computer Engineering + PEY Co-op *Sept 2022 - 2027*

- Double Minor in **Artificial Intelligence** and **Engineering Business**
- Relavent Courses: Software Engineering, Programming Fundamentals (C++), OS, Applied Deep Learning, Data Structures & Algorithms, Computer Networks I, Machine Learning

Experience

Research Assistant July 2022 – Sept 2022

Queen's University *Kingston, ON*

- Filtered through **1000+** journals regarding Code Architecture, increasing team productivity by **50%**
- Applied string searching, meta-reading, and snowballing techniques to compile a comprehensive file of resources

Data Research Intern July 2021 – Sept 2021

Queen's University *Kingston, ON*

- Developed a database of over **10000 entries** for commenting patterns found in Smart Contracts by leveraging **Python, RegEx, and Pandas** for data manipulation and pre-processing
- Increased efficiency by **100%** through the creation of a command-line interface using **PyInquirer** for updating internal publication database

Projects

Skin Cancer Detection August 2024

Python, NumPy, Pytorch

- Developed a mulitclassification CNN model with **84%** detection accuracy using HAM10000 Dataset
- Increased model accuracy by **30%** utilizing regulization techniques such as Drop-Out, Data Augmentation, and Batch Normalization

Fruit Ninja March 2024

C, DE1-SoC Board, NIOS II Assembly

- Developed a Fruit Ninja game on the **DE1-SoC FPGA board** with gravity like projectile motion
- Used interrupt based game logic to allow for **ps2 mouse** input synchronized with the internal **50 MHz hardware clock** allowing pixel accuracy for collision checking
- Implemented **double buffering** to ensure smooth graphics and operations of the game to the **VGA** display

TrailBlazer - Geographic Information System April 2024

C++, OpenStreetMap, GTK, Glade, STL

- Increased path finding time by **25%** through the **A*** algorithm
- Reduced setup and computation time by **35%** through **Multi-Threading** and **Agile** development
- Found a solution to the Travelling Courier Problem through Greedy, 2-Opt, and Simulated Annealing Algorithms

Movie Recommendation Feb 2022

Java, Swing, AWT

- Developed a recommendation program with both back-end and front-end properties using **Java** and **Swing**
- Achieved a recommendation accuracy of **85%** using Collaborative Filtering which bases recommendation from similar profiles and current movie ratings

Technical Skills

Languages: C++, C, Python, Java, Assembly, SQL, Linux, MATLAB
Tools/Libraries: Selenium, Jupyter Notebook, RegEx, Swing, Pytorch, Scikit-learn, , Tensorflow, Pandas, NumPy, Matplotlib, PyInquirer, HTML/CSS, Git, Docker
Experienced in: Agile/TDD/Waterfall development and Team-based projects