Edwin Chacko

Toronto, Canada

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Summary

Undergraduate student at the University of Toronto with a passion for software engineering. Developed web applications using JavaScript and C++ (Crow Framework) and actively developing a ML stock market forecaster. Skilled in Python, C/C++, and JavaScript with a keen interest in machine learning. Eager to collaborate on projects, continuously learn, and stay updated with industry trends.

Projects

Chess application with REST API AI

Brampton, Ontario

Skills: OOP, C++, Crow, JS, Postman, Web Design

May 2023 - Jul 2023

- Developed a browser-based chess application offering both 2-player and advanced AI opponent with dynamic square highlights.
- Incorporated an AI engine using the minimax algorithm with alpha-beta pruning, zobrist caching, and iterative deepening.
- Seamlessly integrated a **C++ REST API**, built on the Crow framework, to **run AI computation 90% faster**.
- Leveraged object-oriented programming to design modular classes, ensuring enhanced scalability and maintainability.

AI Stock Market Forcaster

Brampton, Ontario

Skills: Python, NumPy, TensorFlow, Pandas, Scikit-learn, APIs

Jul 2023 - Present

- Leveraged Python and its libraries on a Linux platform to design and test predictive models based on historical financial data.
- Utilized advanced data analysis techniques and time series forecasting models to analyze stock market trends, **increasing prediction accuracy**.
- Conducted rigorous model evaluation and optimization, employing cross-validation to ensure robustness and reliability of predictive models.
- Integrated financial data via Yahoo Finance API for market analysis, demonstrating **proficiency in handling and processing large datasets**.

Experience

Coursework

Toronto, Canada

Data Structures and Algorithms, and Computer Architecture

Sept 2022 - May 2023

- ESC180: Mastered programming fundamentals; developed complex projects including a Gomoku game.
- ESC190: Applied advanced data structures **(hash tables, stacks, trees,)** in practical labs and projects.
- ECE253: Programmed in **Assembly and Verilog**; focused on digital systems and logic devices.
- Emphasized programming with a focus on underlying computer architecture for system-efficient coding.
- **Technical Skills:** Python, C, Assembly, MATLAB, Verilog, Object Oriented Programming, Computer Architecture.
- **Soft Skills:** Teamwork, Communication, Logical Thinking, Independent-learning.

Vacs Calibrations Ltd.

Brampton, Canada

Calibration Engineer - Intern

May 2023 - Aug 2023

- Calibrated electronic and mechanical equipment, **following the IEE and ISO17025 standards**.
- Worked closely with other engineering teams to understand their equipment needs and provide calibration support as necessary.
- Aided in periodic quality assurance checks to ensure the ongoing accuracy of calibrated equipment.
- **Technical Skills:** Python, Excel, Access.
- **Soft Skills:** Time Management, Communication, Presentation skills, Independent-learning.

UTFR Driverless

Toronto, Canada

Perception ML Engineer

Sept 2023 - Current

- Leveraged **OpenCV** to integrate image classification and object detection algortihms with LiDar technology.
- Designed an algorithm for 3D cone localization from 2D bounding boxes using a pinhole camera model.
- Developed a LiDAR-based cone detection algorithm using researched cone equations.
- **Technical Skills:** Python, OpenCV, ROS, Git.
- **Soft Skills:** Teamwork, Communication, Leadership, Time-management.

Skills

Programming	**Python, C/C++, JavaScript**, Crow, HTML/CSS, Django, MATLAB, Assembly, Python ML libraries, Linux (Ubuntu), Shell Scripting.
Miscellaneous	Linux, Visual Studio, LaTeX, Microsoft Office, **Git**, Docker, Ubuntu 20.04.
Soft Skills	Time Management, **Teamwork**, Problem-solving, **Resourcefulness**, Passion.

Education

University of Toronto

Toronto, Canada

BASc in Engineering Science

Sept 2022 - Current

- Intended Major in **Machine Intelligence**, Intended Minor In **Artificial Intelligence Engineering**
- **Relavent Courses:** Introduction to Computer Programming, Data Structures and Algorithms, Linear Algebra, Calculus III.

References available upon request.