ADRIAN YU

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Education

Toronto Metropolitan University   **Sep. 2021 – May 2026**
Candidate for Bachelor of Computer Engineering   *Toronto, Ontario*

Relevant Coursework

- Advanced Algorithms and Data Structures
- Computer Vision
- Engineering Algorithms
- Computer Organization and Architecture
- Software Requirement Analysis and SPEC
- Software Design and Architecture
- Computer Networks
- Database Systems

Experience

Oak Valley Health   **January 2025 – March 2025**
Data Analyst Intern   *Markham, ON*

- Converted legacy SAS code to SQL, helping reduce licensing costs while processing and filtering over 10,000 records.
- Validated the accuracy of healthcare data in collaboration with analysts by cross-referencing source systems, while independently troubleshooting and optimizing 50+ SQL queries, reducing execution time by 15%.
- Documented 60+ automated reconciliation checks, improving transparency and efficiency in data validation processes.

Safari Kid   **June 2015 – August 2023**
Coding Instructor   *Richmond Hill, ON*

- Taught coding to over 100+ young learners, fostering a deep understanding and passion for technology, with a 90% student satisfaction rate based on feedback.
- Prepared tailored educational programs, customizing lessons for 10+ students per class, improving student coding proficiency by 30% over the course of a term.
- Created a supportive classroom environment, empowering students to complete coding projects independently, resulting in 80% of students progressing to advanced coding levels during their time in the program.

Projects

HoopLab   **https://github.com/adrianyu91/HoopLab.git**

- Designed a full-stack web application using TypeScript, React, Node.js, and AWS DynamoDB, enabling users to track and create over 500 personalized basketball workout plans based on their skill level and position.
- Designed scalable database schema for AWS DynamoDB to efficiently store 1,000+ workout logs and user-generated plans.
- Ensured smooth backend API in Node.js, allowing users to save and retrieve custom workouts with less than 1-second latency, supporting 10+ active users in real-time.

AI Code Sentinel Debugger   **https://github.com/adrianyu91/AI-Code-Sentinel.git**

- Engineered a real-time debugging assistant that detects errors in Python scripts and provides AI-driven fixes using the Gemini API, reducing manual error troubleshooting time by 30%.
- Introduced an interactive PySide6 GUI, enabling users to seamlessly monitor and execute scripts, improving user interaction efficiency by 40% compared to manual debugging.
- Integrated Watchdog for automated file tracking, allowing script execution upon modification, resulting in real-time error detection and correction without the need for copying and pasting into external tools.

NBA Predictor

- Manipulated NBA game prediction model using Python, Jupyter Notebooks, Scikit-learn, and Pandas, analyzing 7 seasons of data with over 17,000 data points, achieving a 60% in prediction accuracy.
- Scraped and parsed NBA box scores using BeautifulSoup, cleaning 17,000+ lines of HTML data and converting it into pandas DataFrames for seamless machine learning integration.
- Conducted feature selection to identify significant predictors, enhancing the performance of the machine learning model.

Technical Skills

Languages: Java, Python, C/C++, SQL (Postgres), JavaScript, Typescript, HTML/CSS
Technologies: React, Node.js, Next.js, Express Flask, MongoDB, AWS, Azure