

Aaron Chan

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EDUCATION

Toronto Metropolitan University

Bachelor of Engineering, Computer Engineering

Toronto, ON

Sept. 2020 – Apr. 2025

EXPERIENCE

Software Developer Intern

BMO

Jan. 2025 – Apr. 2025

Toronto, ON

- Spearheaded the development of a proof of concept for modularizing 3+ redundant Python codebases into structured, locally installable packages, improving code reusability by 40% and streamlining testing processes across 3 engineering teams.
- Presented comprehensive findings and proposed best practices (e.g., semantic versioning, automated dependency management) to the entire team of 15+ developers, influencing the wider adoption of Python packaging standards across 5 critical tenants.
- Engineered a robust data verification function leveraging SHA-256 hashing to validate consistency between local files and AWS S3 uploads, reducing data discrepancies and enhancing overall system reliability.

Software Developer Intern

BMO

May 2024 – Aug. 2024

Toronto, ON

- Developed and deployed a standardized documentation workflow using Sphinx and automated Confluence Cloud API integration, reducing manual documentation time by 50% and ensuring real-time accuracy across tenant-specific product pages.
- Designed and implemented a robust, system-wide error-handling wrapper in Python that preserved core system functionality while adding detailed logging and exception tracking.
- Collaborated with the engineering team using Jira and Confluence to optimize project tracking, streamline task coordination, and enhance technical documentation, leading to a 20% improvement in overall team transparency and workflow efficiency.

Software Developer Intern

Napoleon Group of Companies

May 2023 – Apr. 2024

Barrie, ON

- Led the initial development and deployment of a customer-facing web dashboard using Python Flask, architecting core features with efficient GET and POST requests to support thermostat data interaction.
- Designed and integrated interactive temperature graphs using Matplotlib and optimized RESTful API calls to extract and visualize complex device usage data, providing key insights to the product team for data-driven feature prioritization.
- Built and maintained robust Python automation scripts leveraging scheduled cron jobs to efficiently process, transform, and analyze 3GB of daily customer data, reducing manual data preparation time by 20 hours/week and generating weekly insights for sales and marketing reports.
- Managed a MySQL customer database with over 400 customers, ensuring data integrity through schema enforcement and transactional updates and optimizing query performance.

PROJECTS

ShotSpotter | Computer Vision & Machine Learning Project

Sept. 2024 – Dec. 2024

- Developed an end-to-end computer vision pipeline in Python to track basketball shots and update scores in real-time, using YOLO for object detection and DeepSORT for tracking
- Built and trained a CNN using TensorFlow and Keras to classify shot types (three-pointers, two-pointers, and free throws) with high model performance (95.8% precision, 94.4% recall)
- Engineered a video analysis system with OpenCV to extract and annotate NBA game footage, streamlining training data preparation

TECHNICAL SKILLS

Languages: Java, Python, SQL, JavaScript, HTML/CSS

Frameworks: React, Node.js, Flask, JUnit, FastAPI

Developer Tools: Git, Docker, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse