Jerry You

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EDUCATION

University of Guelph   Sep 2022 - Present
Bachelor of Computing Honours, Computer Science (Co-op)   Guelph, Ontario
- GPA: 3.7/4.0 - Dean's List 2023-2025

SKILLS

Languages	Python, JavaScript, HTML / CSS, Java, C/C++, SQL
Development Tools	Git, Unix, Docker, Nginx, pgAdmin, Grafana, Metabase
Frameworks / Libraries	Django, Flask, React, SQLAlchemy, Pandas, NumPy

WORK EXPERIENCE

Data Engineer (Co-op)   Sep 2024 - Dec 2024
Johnson Electric Holdings Ltd.   Ancaster, Ontario
- Developed a Python-based ETL system to automate factory data processing, storing data into a PostgreSQL database with scheduled execution via Windows Task Scheduler.
- Built a Django web application to provide an interactive interface for factory operators to view, query, and manage real-time factory data, improving operational efficiency.
- Created SQL-powered dashboards in Grafana and Metabase to visualize machine activity, track downtime, and uncover trends in production efficiency.
- Supported IT infrastructure and factory tech integration, including configuring and deploying over 40 routers, resolving network issues, and aligning operational workflows with software systems and data pipelines.

Lab Software Developer (Co-op)   May 2024 - Aug 2024
University of Guelph   Guelph, Ontario
- Developed a Python-based EMG analysis tool with a custom GUI, capable of processing thousands of large-scale data files (up to 1,000,000 lines each), generating formatted Excel outputs, and visualizing key signal features for insights.
- Created a web-based tool to assist with transposing kinematic data from Visual3D to Excel format, allowing for easier data manipulation and analysis.
- Designed and customized a laboratory website in WordPress, optimizing themes and plugins to meet research needs.
- Built and configured laboratory workstations, including hardware installation, software setup, troubleshooting, and system upgrades to support high-performance research computing tasks.

PROJECTS

PCTracker | Python, Django, MySQL, Nginx/Gunicorn   pctracker.ca | Dec 2023 - Present
- Developed a comprehensive PC hardware platform that integrates real-time eBay pricing data, allowing users to search for instant price comparisons, build custom PC configurations with price estimates, and analyze component benchmarks.
- Utilized eBay's API with OAuth tokens to automate the extraction of real-time pricing data for second-hand computer hardware, efficiently processing up to 5000 API calls daily.
- Created a dynamic database system that stores detailed specifications and pricing for thousands of individual components, manages compatibility relationships between parts, and allows users to build and save custom PC configurations through personal accounts.
- Engineered a secure user authentication system with Django's built-in two-factor authentication, protecting user accounts and saved configurations.

Billiards Simulation | C, Python, SWIG, SQLite   github.com/jerryyou04/billiards | Mar 2024 - Apr 2024
- Developed an interactive billiards physics simulation that accurately models ball collisions, friction, and cue interactions, allowing users to play pool games in a web browser.
- Engineered a high-performance physics engine in C that handles complex collision detection and response, calculating trajectories with mathematical precision.
- Utilized SWIG to connect the C physics engine with a Python backend, enabling efficient processing while maintaining flexible game logic management.
- Designed an interactive frontend using JavaScript and SVG animations that provides real-time visual feedback of the physics simulation, including ball movements and collision effects.