

Gordon Wang

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EDUCATION

- **University of Waterloo** Waterloo, ON
Computer Science and Financial Management; Cumulative Average: 91/100 (4.0 GPA) Sep 2023 – April 2028

EXPERIENCE

- **Advantage Group International** Toronto, ON
Software Developer Co-op May 2024 - Aug 2024
 - **Database (PostgreSQL):** Developed **SQL** update scripts to generate tables and views for data collection.
 - **Back-end (Java Spring Boot):** Developed **DAOs**, **JPA Repositories**, **Rest API** queries, **Quartz** jobs, and **JUnit** tests for data collection in the back-end of company survey software.
 - **Front-end (Angular):** Enhanced features and performance of existing web app to provide an intuitive data management interface. Utilized **Gradle** as the build tool for efficient project configuration and management.
 - **ETL Processing:** Orchestrated comprehensive **ETL** processes to efficiently transfer data to the **data warehouse**, ensuring data integrity and readiness for analysis.
 - **Tableau:** Engineered **Tableau** dashboards with map and table views for **Data Visualization**.
 - **Agile Development Cycle:** Daily **Scrums**, **Code Reviews**, **Git** version control, **CI/CD**, and **Jenkins** deployment.
- **Waterloop Design Team** Waterloo, ON
Web Team Lead/Full-stack Developer Apr 2022 - Aug 2024
 - **Front-end Development (React/Typescript/Redux/Styled-components/CSS/Figma):** Developed pages in collaboration with **UI/UX** designers, ensuring features met both aesthetic and functional requirements.
 - **Back-end and Database Development (Node.js/Express/Knex/Axios/Docker/Google Cloud):** Developed **APIs** and database queries to connect the **Content Management System** with the main website.
 - **Leadership Role:** Organized all the meetings, planned the term goals and delegated different tasks.
 - **Timely Agile Practices:** Led the team to implement **50%** of a project's features within 4 months.
- **University of Waterloo - School of Accounting and Finance** Waterloo, ON
Teaching Assistant (CFM-101: Introduction to Financial Markets and Data Analytics) Starting Sep 2024
 - **Leading Tutorials:** Teaching students how to use **Python**, **Pandas**, and **NumPy** to analyze stock data and understand financial data management concepts.
 - **Grading:** Grading assignments to ensure students accurately applied data analysis techniques using **Python**.
 - **Student Support:** Clarifying complex topics related to stock data analysis and financial concepts.
 - **Top Academic Achiever:** Selected as one of only two TAs, recognized for top academic achievements.
- **G12 Uni (UWaterloo Velocity Startup)** Waterloo, ON
Full-stack Developer Nov 2023 - Apr 2024
 - **Front-end Web Development (React/NextUI):** Developed dynamic web pages with aesthetic design.
 - **Back-end Web Development (Firebase):** Integrated **RESTful APIs** and managed database updates.
 - **Resource Management and Software Design:** Led project planning, brainstorming sessions, and utilized **UML** diagrams to design and communicate software architecture.
 - **Startup Growth:** Scaled monthly website visits from **100** to over **10,000**.
- **Space Place Canada** Toronto, ON
Tech Consultant Intern Starting Sep 2024
 - **Technology Solutions:** Advising on the integration of **VR** and **AI** technologies for Space Place Canada's planetarium project, enhancing educational and storytelling experiences for the public.
- **University of Waterloo Residence Council** Waterloo, ON
Vice-president of Finance Sep 2023 - Apr 2024
 - **Communication and Teamwork:** Co-led team of 8 members to organize events and budget costs for residence.

PROJECTS

- **Robo Stock Portfolio Advisor (Python, Panda, NumPy, Jupyter Notebook, yfinance, Bash):**
Python program to create the safest possible stock portfolio from a given list.
 - Designed and implemented an algorithm to analyze and compare stock correlations based on historical data.
 - Utilized **Pandas** for data manipulation and analysis, including data cleaning, transformation, and visualization.
 - Leveraged **NumPy** for numerical operations and efficient handling of large datasets.
 - Generated a diversified portfolio by selecting the least correlated stocks to minimize risk.(Github: <https://github.com/G-Wang12/Safe-Portfolio-Robo-Advising>)
- **A2 Console User Geographic Info Collection (PostgreSQL, Java Spring Boot, Tableau):**
Geographic info collection for Advantage Group's survey software.
 - Created **SQL** update scripts to generate tables and views for storing user geographic information.
 - Implemented a process in the **Java Spring Boot** back-end to store user IP addresses during survey data transfer.
 - Developed a data transfer service and **Quartz** job for converting the stored IPs into Geographic info for survey users.
 - Orchestrated an **ETL** process to transfer historical survey data into data warehouse.
 - Created a **Tableau** report containing multiple chart views to visualize historical geographic data from survey users.
- **G12 Uni Platform (React, Firebase):**
Platform to simplify the university selection process for high school students by connecting them with their university community and guiding them to find the right university and major. (Link: <https://g12uni.com/>)
- **Waterloop Main Site (React, Typescript, Redux, Styled-components, HTML, CSS, REST API, Bash):**
Site to represent Waterloop professionally so we can help establish and sustain our network of supporters and sponsors, as well as showcase all the cool stuff the team is working on. Also includes a recruitment section.
(Github: <https://github.com/waterloop/waterloop-website>)
- **Waterloop CMS (React, Typescript, Javascript, Redux, Node.js, Express.js, HTML, CSS, Docker):**
Content Management System for Waterloop sites. Allows executives to directly update the content on main site without needing to change the codebase themselves.
(Github: <https://github.com/waterloop/waterloop-cms>)
- **Waterloop Executive Dashboard (React, Typescript, Redux, Styled-components, HTML, CSS, Docker):**
An all-in-one ATS and member analytics tool used by subteam leads.
(Github: <https://github.com/waterloop/executive-dashboard>)
- **Summer Camp Site (React, Typescript, Javascript, HTML, CSS, Bash):** Developed a website using React.js to help promote a friend's summer camp. Integrated Google Analytics to view user statistics.
(Github: <https://github.com/G-Wang12/Summer-Camp-Site>)

TECHNICAL SKILLS

- **Languages:** Java, Python, C, C++, JavaScript, TypeScript, SQL, HTML, CSS, Racket, Bash, Powershell
- **Libraries/Frameworks:** React.js, Node.js, Express.js, Knex.js, Axios, Redux, Styled-components, Angular, Spring Boot, PostgreSQL, pandas, NumPy, Matplotlib, yfinance, Quartz, JPA, Hibernate
- **Developer Tools:** Git, Github, Gitlab, Docker, VS Code, IntelliJ, Figma, Clickup, YouTrack, Firebase, Jupyter Notebook, Tableau, MongoDB, Gradle, Google Cloud, Linux

NOTABLE FEATURES IMPLEMENTED

- **Google Authentication on Executive Dashboard (React, Typescript, Redux, REST API):**
Implemented the whole Google authentication process on Executive Dashboard user login.
 - Imported and configured the @react-oauth/google library
 - Developed components to manage the Google authentication steps on the front-end
 - APIs to manage user profile and access token in back-end
 - Stored and retrieved access tokens using cookies and Redux
 - Validated access tokens on both front-end and back-end
- **Merch Store Feature on Main Site (React, Typescript, Redux, REST API, Knex):**
Amazon-like store with products list and product details pages that allows users to purchase Waterloop merch.
 - Designed new PostgreSQL tables using Knex
 - Developed Internal APIs to provide merch product data to the main site
 - Leveraged Redux for state management of merch product data on the main site
 - Implemented pages and hooks to display product lists and details on the front-end