






# PHILIP CHEN

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## TECHNICAL SKILLS

**Languages:** Python, Java, JavaScript, TypeScript, C/C++, SQL, HTML/CSS

**Technologies:** React, Next.js, Node.js, Express, Flask, Pandas, NumPy, PostgreSQL, MongoDB, Redux, Selenium, Docker, Git, Bash, Linux, PowerShell, Tailwind CSS, Google Cloud, Firebase

## EXPERIENCE

### Junior Programmer

May 2024 – August 2024

Treasury Board Secretariat

Toronto, Canada

- Implemented **DevOps** using **Azure** to push significant contributions to the **Software Development Life Cycle** of the RIDE-TI project: a revenue, imaging, and **data capture solution** for the Ministry of Finance's delivery of time-sensitive services
- Spearheaded** the development of a defect report software with **70+ users** using **Flask**, **Next.js**, and **Firebase**, saving **30+ hours** and improving accuracy by **25%**
- Developed **PowerShell** scripts to reorganize company file distribution, facilitate file movement and archive disposal, and automate tedious daily tasks; reduced workload by **10+ hours** a week
- Propelled the Ministry's Digital First initiative by reducing paper document submissions by **37%** and significantly improving customer service and administration

### Director

January 2022 – May 2022

Target Alpha

Canada

- Organized financial literacy conferences, competitions, and resources for **1400+** students (**50+** chapters) across the nation
- Designed competition materials and promoted events through posters, advertisements, social media, and video shorts; initiated collaborations with **100+** schools and organizations, including the **Wharton School**, **Ivey Business School**, and **CPA**
- Directed** the outreach, promotion, branding, and content creation for the **national** Financial Planners' Conference (FPC); generated **historic record** of **200+** competitors across Canada

## PROJECTS

### **RIDE-TI Reporter** | Python, Flask, Next.js, TypeScript, Firebase, Tailwind CSS

- Developed a web application with **70+ users** for automating the production of PROD and UAT defect reports, improving report accuracy by **25%** and production time by **98%**; features **user authentication** secured using **Redux**
- Extracts ticket information with **Selenium** and uses **Pandas** for data storage/refinement; data is written to Excel using **openpyxl**
- Utilizes **Firebase** Realtime Database for storing owner/requestor data and performs **CRUD** operations based on user activity
- Containerized backend with **Docker** and deployed on **Google Cloud**

### **Memoir** | Python, Flask, MongoDB, React, JavaScript, Tailwind CSS

- Developed a social media app for sharing and connecting with others through nostalgic memories
- Employs **Auth0** for user login **identity verification** and additional security/authentication measures
- Implements **MongoDB Atlas** for secure backend data storage (posts, user data, networks, etc.)
- Features an intricate **dynamic network graph** with **100+ nodes** for illustrating user-post connections; data is semantically analyzed with **Cohere** and processed using a **BIRCH Clustering** algorithm from **scikit-learn** before visual rendering with **D3.js**

### **Zombie Survival** | Java, Swing

- Designed a top-down zombie survival video game using **object-oriented programming**
- Employed **multithreading** to instantiate and concurrently execute **20+** mutually interacting objects, including *Zombie* objects, continuous reading of keyboard instruction from the *Player*, and **state mutation** (timer, player health, etc.); asynchronously executes and manages **1000+ threads** in later rounds
- Features a dynamic UI (with splash screen) implemented with **Swing** and **Java AWT**, as well as a **JFrame** for hosting the UI

### **Where Is the ISS?** | React, Node.js, JavaScript, Tailwind CSS

- Created a tracker for the International Space Station (ISS) for displaying the live location of the ISS (**whereistheiss.io**)
- Receives live ISS location information via **GET** requests made to the WTIS **REST API** using **Axios** HTTP Client
- Features a nostalgic, 8-bit-inspired UI theme implemented with **Tailwind CSS**

## EDUCATION

### University of Waterloo

September 2023 – Present

Bachelor of Computer Science – GPA: 3.9

Waterloo, ON

- Courses: **Object-Oriented** Software Development, Computer Organization and Design, Probability (**Advanced**), Logic and Computation
- Awards: Software Engineering Entrance Scholarship (**\$4000**), President's Scholarship of Distinction (**\$2000**)