

DANIEL XU

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EDUCATION

University of Waterloo

Bachelor of Computer Science (GPA: 4.0)

Waterloo, ON

Expected Graduation Date: April 2026

EXPERIENCE

Full-Stack Web Developer

May 2023 – Present

BlackBerry

- Authored pages to production on BlackBerry website using **AEM** and **CRXDE Lite**, completing **50+ tickets**
- Programmed **10+** functional components on master repository using **TypeScript**, **HTL**, and **SASS**
- Optimized **JavaScript/TypeScript** bundle file sizes, external package imports, and **SASS** transitions, resulting in drastic improvement in Desktop/Mobile site performance according to Google Lighthouse benchmarks
- Collaborated with stakeholders from the Corporate, IoT, and Cyber Security teams to ensure completion of development tasks, fostering cross-functional communication through **JIRA**, **Optimizely**, and **Microsoft Teams**
- Delivered full-stack application for 2023 RSA Conference within accelerated timeline, using **JavaScript** and **FormData API**

Software Engineer

November 2022 – May 2023

Discourse Agency

- Self-developed **privilege walk application** using **Next.js**, **Tailwind CSS**, and **Anime.js** for Discourse Agency
- Implemented dynamic questionnaire with **30 questions**, employing **statistical analysis** to measure user privilege
- Automated generation and emailing of score reports, containing a heat map showcasing geographical distribution of participants and **quantitative measurements** of user privilege, using **JavaScript**
- Utilized **Firebase's Realtime Database** to securely store/retrieve user data, ensuring seamless database synchronization
- Optimized data reading **time efficiency** and incorporated asynchronous components to improve render time by **81+%**
- Leveraged **Git**, **Github**, and **Microsoft Teams** to coordinate code review/improvement and debugging with stakeholders

PROJECTS

Dreamscape | *Next.js, Tailwind CSS, Firebase, TypeScript, DALLE-2*

- Programmed innovative 'dream journal' social media platform with responsive UI using **React** and **Tailwind CSS**
- Placed **1st** out of **100+ participants** in Project Program hackathon at the University of Waterloo, winning **\$800 prize**
- Integrated machine learning via **DALLE-2** to generate unique images for each user's dream, improving user experience
- Created a **RESTful API** with **CRUD** operations, using indexing and query optimization for efficient data retrieval and manipulation with **Firebase** and **Next.js**, enabling real-time updates for posting, commenting, liking and friending
- Incorporated infinite scroll in feed, improving site loading speed, and decreasing image hosting cost by **90%**

Stock Market Sentiment Analysis | *Python, Pandas, Matplotlib, NLTK*

- Generated investment insight for **Facebook** and **Tesla** through sentiment analysis with **Python** and **NLTK**
- Scraped **500 news headlines** into data tables and produced time series data visualizations to predict stock market sentiment, using **Pandas** and **Matplotlib**
- Developed algorithm to filter verbatim copied headlines, improving statistical modeling accuracy by **4.8%**

Credit Card Approvals | *Python, Pandas, NumPy, Scikit-learn*

- Built machine learning model to predict credit card application approvals with **Pandas**, **NumPy**, **Scikit-learn**
- Pre-processed train/test data sets with missing value imputation, label encoding, and scaling to achieve **85.2% model classifier accuracy**, using **Pandas** and **NumPy**
- Performed **grid search** to find **2 optimal hyperparameters** of logistic model, increasing performance potential

CodeMan | *Java*

- Designed and programmed 'Pokémon' inspired **Java** 2D game using **OOP principles** such as abstraction, polymorphism, and inheritance, achieving a modular and extensible codebase
- Implemented a **70x60** matrix-based world map, incorporating self-created tiles and sprites using **Piskel**
- Optimized frame-to-frame render time to **0.005s** with delta game loop and FPS limiter, ensuring smooth gameplay

SKILLS

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

Frameworks/Libraries: Pandas, Matplotlib, NumPy, React, Next.js, Bootstrap, Tailwind CSS, Firebase, jQuery

Technologies: Git, Linux, Github, Adobe Experience Manager (AEM), JIRA, Figma, GitLab, Optimizely