




JACOB FU

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TECHNICAL SKILLS

Languages: Python, Java, JavaScript/TypeScript, HTML/CSS, SQL, C, Bash, PowerShell

Frameworks & Libraries: React, Node.js, Express.js, Next.js, Django, MongoDB, PostgreSQL, SQLite, Tailwind CSS, Pandas, NumPy

Developer Tools: Git, GitHub, Docker, Postman, Firebase, Jupyter Notebook, Linux Shell, JIRA, Figma

EXPERIENCE

Software Developer

Jan 2025 – Apr 2025

PetMap – UC Berkeley Startup

Remote

- Developing a platform using FERN stack (**Firestore, Express, React, Node**) with **TypeScript** for connecting dog lovers and owners.
- Implementing a real-time map interface using Google Maps API and proximity algorithms for location-based user matching.
- Collaborating on feature development in **Agile** sprints within an 8-person team, implementing **CI/CD practices** and code reviews.

Digital Media & Marketing Intern

Jun 2024 – Sep 2024

1000 Islands Gananoque Chamber of Commerce

Gananoque, Canada

- Redesigned website by optimizing navigation and content layout, boosting weekly visitors by **65%** and session duration by **120%**.
- Produced **60+** promotional assets and videos, driving **500+** impressions per video and supporting **2+** marketing campaigns.
- Optimized Mailchimp email campaigns through A/B testing and refining email design and content, increasing click rates by **60%**.

Information Technology Intern

Sep 2023 – Feb 2024

Weehoey

Kingston, Canada

- Developed a **JavaScript** web app to automate work bonus calculations, saving a client's employees **7+** collective hours per month.
- Improved existing server maintenance script by automating log reporting via PowerShell, reducing labor by **30+** minutes daily.
- Monitored and managed **30+** client servers daily, proactively reporting and resolving security vulnerabilities to reduce downtime.

HTML5 Game Developer

Jun 2019 – Apr 2022

Self-employed

Kingston, Canada

- Developed a multiplayer zombie-survival .io game using **Modd.io HTML5 Game Engine**, Modd.io server hosting, and **HTML/CSS**.
- Grew player base to **248K+** users with **4.2M+** gameplay sessions, generating **\$2,500+ CAD** through Patreon and micro-transactions.
- Led a team of 3 developers using **Agile** practices to efficiently deliver weekly updates such as new maps, items, and events.

PROJECTS

FairFi   | *JavaScript | Next.js | React | Express.js | Node.js | MongoDB | Tailwind CSS* |

- Won **NSBE X P&G Fintech Equity Challenge** among **160+** teams at McMaster University's DeltaHacks XI 2025 Hackathon.
- Built a **Twilio** and **Cohere**-powered web app for AI-customer call simulation to detect employee bias, storing call data in **MongoDB**.
- Developed a bias visualization dashboard, allowing real-time analysis of customer sentiments using **Cohere's Command R+ Model**.

MelodyVe   | *JavaScript | Next.js | React | Express.js | Node.js | MongoDB | NextAuth.js | Tailwind CSS* |

- Created a full-stack web app to analyze users' musical compatibility using Spotify and OpenAI APIs for listening data and analysis.
- Architected REST APIs with **Node.js** and **Express.js**, reducing data processing latency by implementing efficient request handling.
- Designed **MongoDB** database with **NextAuth.js** OAuth authentication, enabling user sessions with report storage and retrieval.

AnonAlyze   | *JavaScript | Next.js | React | Express.js | Node.js | Tailwind CSS* |

- Won **Best Security Hack** among **60+** teams at York University's CTRL+HACK+DEL 2024 Hackathon.
- Created a full-stack web app using OpenAI and Apify APIs for data and analysis to identify users' social media privacy vulnerabilities.
- Built RESTful API endpoints with **Node.js** and **Express.js** for social media data processing and privacy insights generation.

EchoBl   | *Python | HTML/CSS | Django | PostgreSQL | SQLite | Tailwind CSS* |

- Developed a discussion platform using **Django** and **Python** enabling users to create topic-based chat rooms for real-time debates.
- Built complete user system with authentication, profile management, and chat messaging using **Django auth** and **SQLite** database.
- Scaled application through **PostgreSQL** migration and Render cloud deployment, implementing secure database configuration.

Robo Investment Portfolio Generator  | *Python | Pandas | NumPy | yfinance | Jupyter Notebook* |

- Developed a **Python** stock portfolio generator leveraging momentum investing to identify high-performing stocks in bull markets.
- Built an algorithm using **Pandas** and **NumPy** based on metrics like beta and volatility to optimize for market-beating stock picks.

EDUCATION

University of Waterloo

Sep 2024 – Apr 2029

Bachelor of Computing and Financial Management – CGPA: 3.94/4.00

Waterloo, Canada

Awards: Robert Harding Entrance Scholarship (\$5000), President's Scholarship of Distinction (\$2000)