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, Twilio
Developer Tools: Git, GitHub, Docker, AWS, 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 (**Firebase**, **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
Weehooey   *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

RBveal 🔗 ⭘ | *JavaScript* | *Next.js* | *React* | *Express.js* | *Node.js* | *Twilio* | *OpenAI* | *Deepgram* | *Nodemailer* | *Tailwind CSS* |
- Won **First Place Tech@RBC Sponsor Prize** among **125+** teams at University of Toronto's UofTHacks 12 2025 Hackathon.
- Built a multi-stage phishing simulation platform featuring dynamic email generation through **Nodemailer**, realistic banking interface simulations, and AI-powered call agents that adapt behaviour based on user interactions.
- Developed real-time AI phone conversation system using **WebSockets**, **Twilio Media Streams**, **OpenAI**, and **Deepgram** APIs, achieving natural conversational flow with **<2 second** latency and lifelike voice responses.

FairFi 🔗 ⭘ | *JavaScript* | *Next.js* | *React* | *Express.js* | *Node.js* | *MongoDB* | *Twilio* | *Cohere* | *Tailwind CSS* |
- Won **NSBE X P&G Fintech Equity Sponsor Prize** 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**.

AnonAlyze 🔗 ⭘ | *JavaScript* | *Next.js* | *React* | *Express.js* | *Node.js* | *OpenAI* | *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.

EDUCATION

University of Waterloo   Sep 2024 – Apr 2029
Bachelor of Computer Science and Finance – CGPA: 3.94/4.00   *Waterloo, Canada*
Awards: Robert Harding Entrance Scholarship ($5000), President's Scholarship of Distinction ($2000)