Joshua Souphanthong

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EDUCATION

Carleton University   Expected 2028
Bachelor of Computer Science   Ottawa, ON
Relevant Coursework: *Discrete Math & Structures, Linear Algebra, Systems Programming, Algorithms*
Awards & Scholarships: *President's Scholars*

PROJECTS

ClearHealth ⌂ (Mar 2024 - Jan 2025, 1 person project):

- Built a full-stack web application allowing users to upload medical report PDFs and interact with the content by asking questions or highlighting text for definitions and explanations, improving health literacy.
- Integrated **OpenAI's GPT** models to power an AI assistant that provides contextual answers, summaries, and insights directly tied to the uploaded documents, enhancing user experience.
- Designed and implemented a contextual module using **PineconeDB** embeddings, resulting in high-accuracy matching between user queries and document sections.
- Implemented secure user authentication and authorization through **Clerk**, including multi-factor authentication (MFA) to protect sensitive health data.
- Integrated **Stripe** for secure subscription management and payment processing, enabling scalable transaction handling.
- Developed a secure file upload system using **AWS S3**, ensuring scalable, reliable, and protected storage for user-uploaded documents.

StockIt ⌂ (Jan 2025 - uOttaHacks, 4 person project):

- Developed and maintained a full-stack stock watchlist app using **TypeScript**, **React**, **Remix**, and **Gadget API**.
- Implemented secure user authentication with role-based access control and **OAuth** integration via **Google**.
- Built and optimized **RESTful API** endpoints for real-time stock data retrieval and user profile management.
- Designed and developed responsive UI components with **Tailwind CSS** to ensure a consistent cross-device experience.

BetterReads ⌂ (May 2024 - Jun 2024, 3 person project):

- Developed a **Java** application for the **Newmarket High School library** that allows users to scan books (e.g., via ISBN barcode scanning) to retrieve detailed information, enhancing the efficiency of data access.
- Integrated the **Google Books API** to automatically pull up information about scanned books, including titles, authors, summaries, and cover images, providing users with comprehensive insights.
- Collaborated with a team to conduct testing and refine features based on user feedback, improving overall usability and functionality of our application, ensuring a seamless user experience.

EXPERIENCE

Automotive Restoration Technician - Classic Plus Builds   June 2022 - Sep 2024

- **Specialized** in restoring high-end classic automobiles, focusing on comprehensive overhauls of mechanical and aesthetic components.
- Performed meticulous bodywork restoration, including **rust repair**, **panel fabrication**, and precision **alignment** to return the vehicle to its original condition
- Managed project timelines effectively, ensuring the restoration process was completed within scheduled deadlines while maintaining exceptional quality

Founder and President - Richmond Hill High School Robotics Club   September 2022 - June 2024

- Led a team of over **30 members** in designing, building, and programming **VEX** robots for regional competitions, fostering a collaborative environment that encouraged innovation and technical skill development.
- **Secured over $5,000 in funding and sponsorships** by crafting compelling proposals and presenting them to potential donors, ensuring adequate resources for projects and competitions.
- **Promoted STEM education and outreach** by organizing community events, demonstrations, and school presentations, increasing interest in robotics and engineering among younger students.

SKILLS

Languages: Python, Java, Typescript/Javascript, HTML, CSS
Libraries: React, Node.js
Tools: AWS, MongoDB, Clerk, Stripe, Pinecone