

John Lu

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Skills

Languages: JavaScript/TypeScript, Python, Java, C#, C/C++, HTML/CSS, Bash

Frameworks & Libraries: NestJS, Express, Flask, React, Next.js, Django

Developer Tools & Platforms: AWS, Docker, PostgreSQL/MySQL, MongoDB, GitHub Actions, JIRA, ADB, Node.js

Experience

Software Developer - Startup Taskan Studios

June 2025 – Present

- Leverage **GraphQL** to enhance system performance by reducing redundant network requests, minimizing payload sizes by ~40%
- Design a normalized relational database schema via **Prisma ORM** + migrations (**PostgreSQL**), preventing data anomalies
- Integrate third-party services **Google's OAuth2.0**, **Stripe**, and **Twilio** SDKs for secure in-app login, payments, and chat
- Debug **Android builds** using **ADB** and generated signed APKs via Expo CLI to support iterative mobile testing
- Use **Git** branching, rebasing, and code reviews to maintain a clean commit history across a 9-developer team
- Build **GitHub Actions** workflows to lint, build, test, and deploy **Docker** containers, cutting deployment errors by ~56%

Junior Software Developer – Innovation Science Economic Development

Sep 2024 – Dec 2024

- Built **ETL** pipelines to extract and transform data to **data warehouses**, optimizing it for analytics and reporting purposes
- Implemented **SQL** data models and utilized **TypeScript** to automate data exports to Excel, reducing time by 95%
- Designed visualizations to create reports for management and stakeholders, facilitating **data-driven** decision-making
- Authored technical **documentation** to ensure seamless knowledge transfer across development and operational teams

Software Developer Intern – Teaching & Learning Services Carleton

Sep 2023 – Dec 2023

- Championed the creation of a web application with **React** and **Flask**, utilizing a **REST API** for client-server communication
- Utilized **service objects** (OOP) to architect and implement a clean maintainable code base and improve separation of concerns
- Built **React** components with unidirectional data flow, leveraging context to maintain consistent and predictable application state
- Created a suite of automated unit tests using **Jest** and **Pytest**, complemented by manual testing completed by stakeholders

Projects

Care - Open Healthcare Network

Sep 2024 - Present

- Contributing to an open-source real-time healthcare resource management platform with **React** and **Django**
- Leveraged **Redis** to cache frequently accessed data, enhancing retrieval speed and overall application performance
- **Migrated** user model to include 'modified_date' and 'updated_by' fields, ensuring proper audit tracking and data integrity

RavenMap

Sep 2024 - Nov 2024

- Developed a full stack web application using **Next.js** and **TypeScript** to enhance Carleton University's audit system
- Configured an **AWS EC2** instance and **RDS** for scalable, fault-tolerant deployment, enabling **CI/CD**
- Developed comprehensive **unit** and **integration tests** to ensure reliability and performance across the entire application

Product Review Summarization LLM Chrome Extension - UOttHack 2023

Jan 2023 - Feb 2023

- Leveraged **Cohere LLM** to identify the sentiments of product reviews ingested using **Puppeteer** web scraping
- Designed a responsive UI with **HTML**, **D3**, and **CSS** to display key sentiment trends and help users in make informed decisions
- Interfaced with a **MongoDB** database through the Mongoose ODM to efficiently store ratings information

Education

Carleton University, Bachelor of Computer Science Honours

Sep 2022 – Apr 2026

- **Scholarships and Awards:** Dean's Honour List, Paul Mandl Bursary, and Carleton Academic Scholarship
- **Student Involvement:** Computer Science Society Director representing 2500+ students