

# VIKRAMJEET SINGH

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## Technical Skills

**Languages:** Python, Java, SQL, HTML5, CSS, JavaScript, TypeScript, XML, YAML, C  
**Cloud & Dev Tools:** Git, Bitbucket, Docker, Jira, PostgreSQL, MongoDB, GCP, AWS, Firebase, Gitlab CI/CD  
**Frameworks:** Spring Boot, NextJS, ReactJS, ThreeJS, NodeJS, Flask, JUnit, Jest  
**IT tools:** Splunk, DataDog, Dynatrace, ActiveBatch, BMC Control-M, ITIL (ServiceNow, Remedy)

## Work Experience

### TechSwapZone

May 2024 – Aug 2024

#### Full Stack Developer Intern

Cambridge, ON

- Engineered **scalable user profiles and interactive dashboards** using **React.js (TypeScript)** and **Spring Boot (Java)**, boosting core application functionality by **15%**.
- Optimized backend data service deployment by **20%** leveraging **Firebase** for secure authentication and **MariaDB** for robust data persistence, enhancing system stability and data integrity.
- Implemented a **Generative AI chatbot** via **Google Gemini API**, cutting service agent dependency by **25%** and demonstrating a **continuous service improvement mindset** through **prompt engineering**.
- Streamlined development and reduced deployment time by **30 seconds** through **Docker containerization** and optimizing **CI/CD pipelines**, contributing to **efficient application updates** and **post-release checkouts**.

### TechSwapZone

May 2023 – Aug 2023

#### Software Developer Intern (Platform & Performance)

Cambridge, ON

- Drove **15% user engagement increase** by re-engineering **3+ UI components** using **React.js** and **Tailwind CSS**, focusing on maintainability and scalable design.
- Improved **user retention** and **organic traffic** by optimizing codebase, cutting load times **20%** by implementing **lazy loading** and **code-splitting**, boosting SEO **2 positions**.
- Implemented **unit tests** using **React Testing Library** and **Jest**, increasing code coverage to **90%** on **SonarQube**, significantly **reducing regressions** and ensuring **application reliability**.
- Migrated **jQuery-based** legacy interfaces to **React.js**, improving performance by **25%** and enhancing **maintainability for long-term support**.

### Mathnasium

Aug 2023 – Present

#### Coding & Math Instructor

Guelph, ON

- Instructed **15+ students** in fundamental web development with **HTML**, **CSS**, and **JavaScript** creating **5+ projects**.
- Mentored **20+ students** in **Python** and **SQL**, fostering a **20% improvement** in **problem-solving** and foundational **database understanding**, showcasing strong **communication and analytical skills**.

## Projects

### Prepwise | Website

Next.js | Firebase | Google Gemini | Vapi AI

- Implemented **AI-driven features** with **Google Gemini**, applying **Prompt Engineering** for dynamic interview question generation and comprehensive feedback.
- Utilized **Firebase (Firestore)** for scalable **cloud infrastructure** and **data persistence**, managing data models essential for real-time **AI processing** of interview records and feedback.

### Apaline EcoLens

React | Spring Boot | MariaDB | Docker | Jest | JUnit | CI/CD

- Developed **EcoLens**, a **React/Spring Boot** compliance dashboard monitoring real-time wastewater emissions via diverse datasets of **10000+ entries** and geospatial maps.
- Leveraged **Jest/React-testing library**, **JUnit/Mockito**, **pytest**, and **SQL scripts** for isolated, service-to-service, and full-stack testing, ensuring functionality, API interactions, and data integrity.

### 8 Ball Pool (2 Player)

C | Python | SWIG | CSS | JavaScript

- Developed **2-player 8 Ball Pool game** with **C** for physics simulation, interfaced via **SWIG** to a **Python** web server.
- Built interactive frontend with **CSS/JavaScript** and handling **10+ complex edge cases** for realistic gameplay, demonstrating strong **problem-solving** and **attention to detail**.

## Education

### University of Guelph

Apr 2025

Bachelor of Computing, Honors Major in Computer Science **GPA: 3.5/4.0**

Guelph, ON