NEIL SACHDEVA

📞 +1 (647) 671-2042   ✉ n3sachde@uwaterloo.com   in linkedin.com/in/neil-sachdeva   ⓞ github.com/Wiserlightning

Education

University of Waterloo   **Expected Graduation 2026**
Bachelor of Applied Science in Computer Engineering   *Waterloo, ON*
- Relevant Coursework: Systems Programming and Concurrency (**C**), Data Structures and Algorithms (**C++**), Embedded Microprocessor Systems

Experience

MedEssist   **May 2024 – August 2024**
Software Engineering Intern   *Toronto, ON*
- **Developed** a scalable and secure backend using **Node.js** and **Express.js** for **AWS** services (Amazon S3 for file storage, DynamoDB for NoSQL data, Lambda for serverless functions), which resulted in reducing server response time by **1.5** seconds and enhancing data security through encryption and access control.
- **Implemented** real-time data synchronization using **WebSockets** for bidirectional communication and **AWS API Gateway** for routing, improving user productivity by reducing average task completion time by **5 minutes**.
- **Built** a custom CMS with **React.js** for frontend components and **MongoDB** for content storage, deployed on **AWS EC2** instances with auto-scaling, which reduced IT support requests by **30** tickets per month by enabling non-technical staff to update content independently.
- **Integrated** the **Stripe API** for payment processing with **Node.js** backend, leveraging **React.js** for frontend integration, which decreased checkout time by **10** seconds per transaction through optimized payment workflows.

Martinrea Int.   **Sep 2023 – Dec 2023**
Software Engineering Intern, Data Science   *Vaughan, ON*
- **Orchestrated** automated testing with **JMeter** for load testing and **Groovy** scripts for API validation, conducting over **100** comprehensive tests for **REST APIs**, which guaranteed robustness, performance, and scalability.
- **Developed TCP** and **UDP** client/server console applications in **Node.js**, using socket programming to increase data throughput by **50** Mbps through optimized networking algorithms and reduced latency.
- **Performed** thorough database validation in the Dashboard using **SQL**, applying complex joins and aggregate functions to achieve an accuracy rate of **98%**, which enhanced software reliability.

DiamondX   **Jan 2023 – Apr 2023**
Software Developer Intern   *Waterloo, ON*
- **Developed** responsive front-end interfaces using **React.js**, including custom hooks and reusable components, resulting in an increase of **500** active users per month.
- **Implemented Redux** for efficient state management, creating selectors and middleware, which reduced application errors by **10** incidents per week and improved state consistency.
- **Engineered** a serverless backend architecture using **AWS Lambda** for compute and **API Gateway** for endpoint management with **Node.js** and **Express.js**, which improved scalability by supporting an additional **2,000** concurrent users by reducing server dependency.

Projects

JusticeFlow | *Node.js, Express.js, MySQL, Redis, AWS*
- Led a team of **8** volunteers in developing scalable API routes with **Node.js**, and built interactive **React** components to support attorneys at Human Rights First in tracking litigation against extremist groups.
- Optimized data models and queries, integrated **Redis** for caching, and utilized **AWS Aurora** for improved relational database management, ensuring efficient access for **100+** lawyers.
- Deployed **AWS DynamoDB** for managing unstructured case logs, improving system performance by handling large-scale, dynamic data.

ToDoFrenzy | *React, Node.js, Express.js, MongoDB, Materialize, GCP*
- Built a dynamic task management app using the **MERN** stack, enabling users to perform seamless **CRUD** operations through a **Node.js**-based back-end API.
- Established real-time task updates with **React Hooks** and integrated **Firebase** to ensure synchronization across devices, enhancing user experience across platforms.

Technical Skills

- **Languages**: **JavaScript**, **Python**, **Groovy**, **C/C++**, **Java**, **C#**
- **Technologies**: **React**, **Node.js**, **SQL**, **MongoDB**, **Selenium**, **Django**, **Azure**, **Docker**, **Kubernetes**, **AWS**