

Gurdarshan Singh

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Technical Skills

Programming & Scripting Languages: C++, Java, Python, C, JavaScript, SQL, HTML, Kotlin

Web Development: HTML, CSS, JavaScript, TypeScript, React.js, Redux, Angular.js, jQuery, Bootstrap, Material-UI, Node.js, Express.js, RESTful API, Flask, Fast API, DOM, JSON

Database Technologies: SQL, MySQL, MongoDB, PostgreSQL, NoSQL, Database Management

Cloud Services: AWS (Lambda, Kendra, Bedrock, S3, SageMaker, EC2, IAM, OpenSearch, CloudWatch, CloudFormation), Streamlit

DevOps & Tools: Terraform, Docker, Git, GitHub, Heroku, Apache Airflow, Postman, Mailchimp, Confluence, Jira, Version Control, Linux, CI/CD

Computer Science Concepts: Artificial Intelligence, Machine Learning, Object-Oriented Programming, DBMS, Operating System, Virtual Memory, Cache Memory, Encryption, Decryption, Agile Methodology, Full-Stack, Networking, Cloud technologies, Prototypes, SDLC

Relevant Work Experience

MPAC

May 2024 – Dec 2024

Junior Systems Developer (React, AWS, Terraform)

Ontario, Canada

- Built reusable frontend components using **React**, **Material-UI**, **TypeScript**, and **Redux**, replacing a legacy **Angular** app and improving performance by **30%**.
- Maintained and optimized **20+ Apache Airflow DAGs**, resolving pipeline errors and increasing data processing efficiency by **25%**.
- Automated internal processes with **Python** scripts and built a scalable **chatbot** using **AWS Lambda**, **Kendra**, **Bedrock**, **SageMaker**, **Terraform**, and **S3**.

University of Ottawa

Sept 2023 – Apr 2025

Teaching Assistant (Web Development, Computer Architecture)

Ottawa, Canada

- Instructed and mentored students in technologies like **HTML**, **CSS**, **JavaScript**, **Bootstrap**, **jQuery**, **Node.js**, **React**, **Angular**, and **Spring Boot**.
- Delivered lectures and hands-on sessions on **Computer Architecture** and **Computer Graphics**, enhancing student comprehension of key theoretical and practical concepts.

Education

University of Ottawa

Sept 2023 - June 2025

Master of Computer Science (Co-op) (Grade: A+)

Ontario, CA

Guru Gobind Singh Indraprastha University (GGSIPU)

Jul 2019 - Jul 2023

Bachelor of Technology in Information Technology (CGPA: 9.36)

Delhi, India

Projects

SymboleoGPT | **Java**, **Python**, **ChatGPT-4.0 API**, **Eclipse**, **CSV**, **LLM** | [Source Code](#)

- Built an end-to-end automated system that generates and refines Symboleo contracts using **ChatGPT-4.0**, requiring only a single button click in the **Eclipse** IDE.
- Developed a **Java** module to extract compiler errors, which are parsed and forwarded to a **Python** engine that crafts hybrid prompts and interacts with the LLM for iterative improvements.
- Integrated a second one-click feature to auto-generate detailed **CSV** reports for statistical analysis, summarizing error types, frequencies, and line numbers.

Chatty | **MERN Stack**, **Socket.io**, **JWT**, **Zustand**, **TailwindCSS**, **DaisyUI** | [Live Project](#)

- Built a real-time messaging app with **Socket.io** for instant communication and user presence tracking, secured using **JWT**-based authentication and role-based access control.
- Integrated **Zustand** for efficient global state management and designed a fully responsive UI using **TailwindCSS** and **DaisyUI**.

Secrets | **HTML**, **CSS**, **JavaScript**, **Bootstrap**, **jQuery**, **Node.js** | [Source Code](#)

- Developed a secure, encrypted messaging web app with Google OAuth2 authentication using **Passport** and **Passport-Local-Mongoose**, ensuring secure user access.
- Stored user "secrets" in encrypted MongoDB profiles with enforced access restrictions to enhance privacy and security.