

# Jagdeep Singh

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## TECHNICAL SKILLS

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**Languages:** Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, MatLab, R

**Technologies:** Node.js, Next.js, Vue.js, React, Tailwind, TensorFlow

**Tools:** Git, GitHub, Maven, Linux, AWS, GCP RStudio, Visual Studio, Jupyter, Pycharm

## WORK EXPERIENCE

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### Software Developer

Feb 2024 – May 2024

*Velocity Tech, (Student, Part-time)*

*Toronto, ON*

- Developed dynamic React components (navbar, carousel, profile cards) for talent hub platform.
- Contributed to creating APIs for CRUD operations, enhancing data management and backend interaction.
- Collaborated on configuring and deploying AWS Lambda functions to enhance backend functionalities.

## PROJECTS

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### Edu-Flash card WebApp

- Designed and implemented three serverless microservices (User, Deck, Authentication) using Node.js and Express, deployed via Google Cloud Functions for scalable, on-demand processing.
- Integrated services with GCP API Gateway to manage secure API requests and streamlined microservice communication in a cloud environment.
- Reduced database read requests by over 50% and enhanced performance for operations such as deck retrieval by implementing a Redis cache.
- Implemented security measures including IP Whitelisting, API key authentication, and JWT token authorization, ensuring the confidentiality and integrity of user data in compliance with industry standards.

### TradeTrove

- Developed web app connecting users with tradespeople using React for frontend with server-side rendering, and NodeJS with Express for backend, enabling seamless job posting and service engagement
- Designed and optimized PostgreSQL database on GCP for user profiles, job postings, and service offerings.
- Integrated external services like Firebase Authentication and ZIPCode API for secure authentication, location filtering, and communication, enhancing platform usability and reliability.

### DishCraft

- Developed a full-stack recipe application using React for the front end and Node.js with Express for the back end.
- Implemented persistent data storage by integrating a Dockerized PostgreSQL database into the application, showcasing hands-on experience in database management.
- Utilized Docker and Docker Compose for containerization, creating an efficient and scalable deployment process.
- Configured and hosted the application on Google Cloud Platform using a Windows Server 2022 virtual machine, demonstrating proficiency in server setup and management for web applications on cloud infrastructure.

### Networked Game: Deny and Conquer

- Created an online multiplayer game with custom TCP/IP socket programming for precise data control, enabling players to compete for grid control
- Employed multithreading to manage multiple client connections on the server side, ensuring efficient communication and synchronization among players

### Cshell-Command Line Interpreter

- Developed a command-line interpreter in C with basic shell functionalities, environment variable support, built-in commands, and support for interactive and script modes
- Enabled interactive mode with user interaction, script mode for command execution from files, and leveraged system calls for efficient process management and I/O redirection.

## EDUCATION AND CERTIFICATIONS

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### Simon Fraser University

*Bachelor of Computing Science*

Burnaby, BC

*May. 2022 – Dec 2024 (Expected)*

### Langara College

*Associate of Science: Computer Science*

Vancouver, BC

*Sept. 2017 – Sept 2019*