

Jagdeep Singh

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Career Objective

Final-year Computer Science undergraduate with hands-on experience in building scalable backend systems and microservices. Experienced in cloud services (AWS), database management (MongoDB, SQL), and modern frameworks (Golang, Node.js). Seeking opportunities to solve complex technical challenges while contributing to impactful projects.

Skills

Technical Skills

- **Frontend:** HTML, CSS, JavaScript, React
- **Backend:** Node.js, Express.js, Python, Golang
- **Databases:** MongoDB, SQL
- **DevOps & Cloud:** AWS (ECS, S3, SQS, EventBridge, Lambda), Jenkins, Linux, Git, GitHub, Postman, Studio3T
- **Programming Languages:** Java, Python, Golang
- **Tools & Monitoring:** Checkmarx, DataDog
- **Concepts:** Object-Oriented Programming, Operating Systems, Data Structures & Algorithms, DBMS, Computer Networks

Experience

Backend Engineering Intern – Sequoia Consulting Group

April 2024 - Current

- **Security Enhancements:** Reduced critical and medium security defects from 600 to 20 by conducting a comprehensive review of microservice security issues.
- **Code Quality Improvement:** Resolved SonarQube issues, enhancing code quality and maintainability across critical components.
- **Repository Separation:** Collaborated on separating a monolithic service into an independent microservice, improving modularity.
- **API Development:** Designed a wrapper API around the notification system, abstracting complexity and improving reusability.
- **Error Analysis:** Conducted in-depth analysis of 5xx errors, identifying root causes and implementing solutions.
- **Feature Bug Resolution:** Worked with a cross-functional team to resolve feature bugs and production issues.
- **Skills Learned:** Golang, Python, FastAPI, MongoDB, Git, GitHub, AWS

Projects

Video Streaming Pipeline with AWS & Node.js

- **Built a full-stack video processing pipeline using AWS services (S3, SQS, ECS, EventBridge) and Node.js.**
- Developed a **Node.js worker** to poll SQS for S3 events and trigger ECS Fargate tasks for video processing.
- Used **FFmpeg** in Docker containers to transcode videos to HLS format with multiple resolutions.
- Stored HLS segments in **S3** and video metadata in **MongoDB**, enabling **adaptive bitrate streaming**.
- **Shared videos via unique codes** for on-demand streaming using a custom-built player with Video.js.
- **Tech Stack:** Node.js, AWS S3, ECS (Fargate), EventBridge, SQS, FFmpeg, Docker, MongoDB

Coffee Time

- Developed a full-stack e-commerce platform using **MongoDB, Express.js, Node.js, and React.js (MERN)**.
- Integrated **Email.js, JWT, Firebase, Multer**, and **Express Session** for enhanced functionality.
- Implemented features like cart management, voucher functionality, and admin panel for CRUD operations.

Friends (Threads Clone)

- Built a social media platform using **Next.js, TypeScript, MongoDB, Clerk, Tailwind**, and **UploadThing**.
- Implemented secure authentication with Clerk and enabled community creation with threaded discussions.

Note taking app

- Developed a browser-based note-taking app using **HTML, CSS, and JavaScript** with localStorage for persistence.
- Added functionality for marking notes as important and rendering them separately.

Snake Game

- Built a snake game using **React** with **useState** and **useEffect** hooks for state management.
- Integrated a high-score system and implemented smooth navigation with **React Router**.

Education

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| <ul style="list-style-type: none">• Bachelor of Engineering, Computer Science Engineering
Chitkara University
2021 – current
CGPA: 9.88 | <ul style="list-style-type: none">• Class 12th CBSE
Guru Nanak Foundation Public School
2020 – 2021
Percentage: 91.8 |
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Certifications

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| <ul style="list-style-type: none">• Red Hat Application Development I: Programming in Java EE (AD183)
Red Hat Training and Certification, May 2023
Skills Acquired: Core Java Programming | <ul style="list-style-type: none">• Explore Machine Learning Using Python
Infosys, February 2022
Description: Got introduced to Regression, Classification, Clustering, ANN etc. |
| <ul style="list-style-type: none">• C++ by Sololearn
Sololearn, June 2022
Skills Acquired: Practical C++ | <ul style="list-style-type: none">• Python for Data Science
Sololearn, July 2022
Skills Acquired: Numpy, Pandas, Matplotlib |
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