Inderdeep Singh

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SKILLS

- **Languages: Python**, **Java**, **JavaScript (ES5/ES6)**, TypeScript, **SQL**, **HTML**, **CSS**, C#, C, C++
- **Frameworks: React**, Express.js, Next.js, Remix, django, Spring, Spring Boot, FastAPI, Tailwind
- **Other: Node.js**, Kubernetes, **Linux**, **git**, **GitHub**, **MySQL**, **Postgres**, **nginx**, MongoDB, NoSQL, **OAuth2, HTTP**
- **Skills:** Front-end, Agile, Back-end, Full-Stack, Micro-Services, **AWS**, CI/CD, **pm2**, **Jenkins**, SCRUM, Unit Testing, REST

EXPERIENCE

Unscript.ai   **Bangalore, India**
Founding Software Engineer   October 2023 - Present
- Configured & maintained a 3 member **MongoDB** replica-set using **Docker**; Incorporated hardening measures like SSL Encryption, role-based access control (RBAC), password authentication & data encryption at rest.
- Leveraged **nginx** reverse proxy for robust regex path-based load balancing, **TLS termination**, and 301 permanent redirects.
- Single-handedly streamlined **CI/CD** pipelines using **Jenkins** parameterized jobs. Utilized **pm2** to deploy & manage **5+** micro-services. Leveraged **git-crypt** for transparent config file encryption to enable a fast & error-free deployment experience.
- Engineered an interactive dashboard to enable **AI**-backed audio & video generation from text prompts; Utilized **Whisper** (by OpenAI) for Speech-to-Text **transcription** to generate highly accurate subtitles. Tracked API usage with per-request metering & facilitated PDF billing reports for enhanced transparency.
- Architected an efficient, scalable & **asynchronous** video processing pipeline using **Google Pub/Sub** for bulk personalized video creation. Delivered **10000+ videos/day** during peak load and incorporated post-processing tasks such as lossless compression, translation, seamless **Google Drive** uploads, metrics collection, etc.
- Integrated Google authentication using passport.js & signed **cookies**. Wrote custom middleware to safeguard protected routes; Streamlined data fetching, eliminated server state inconsistencies via nested routing; improved lighthouse score from **78 to 95**.
- **Led** a team of **4** to deliver an in-browser video editor built from scratch, with preset templates, layers, slide decks and an intuitive timeline. Deployed a secure **FastAPI** server using EC2 and AWS ALB to perform pre-processing tasks & export stitched videos using **ffmpeg**.
- Collaborated closely with AI, business and product teams to set priorities, establish product evolution roadmap, track progress, and enable open communication. Led the initiative and **owned** several critical client projects in parallel. Guided fellow colleagues, nurtured interns, inculcated solid engineering principles & raised leadership expectations.
- Tech Stack: **Node.js**, **React**, **MongoDB**, **Typescript**, nx, **pm2**, AWS Lambda, **DynamoDB**, **S3**, **Route 53**, SQS, **Cloudfront**, Cloudwatch, Cognito, **Kafka** Streams, **OAuth 2**, Serverless, API Gateway

Birdeye   **Gurugram, India**
Software Developer   June 2020 - Dec 2022
- Worked on **React & Spring Boot** extensively. Incorporated feature requests, resolved bugs, wrote complex business logic & prepared technical documentation. Collaborated with a team of 7; enriched existing system metrics by **17%**.
- Mastered Docker in **<2 months** and delivered large-scale web deployment architectures while collaborating with a team of 4. Developed using test-driven development. Architecture currently hosts 7 web solutions used by **20000+ active users**.
- Tech Stack: **Java**, Hibernate, **Spring**, Spring Boot, Maven, **React**, **React Router**, **Javascript**, Node.js, Redux, Redis, **Kibana**

Shorthills AI   **Gurugram, India**
Software Engineer Intern   July 2019 - December 2019
- Developed an e-commerce app in **django** supporting an initial customer base of **15000+** users. Built several features E2E, from identifying system requirements & dependencies to workload balancing, software implementation & testing.
- Launched a custom pop-up chat interface using **jQuery**, Django Channels and **WebSocket API**. Enabled accelerated query resolution and seamless feedback collection; Boosted customer satisfaction & engagement by up to **88%**.

Grasim Industries Limited   **Karnataka, India**
Software Developer Intern   May 2018 - July 2018
- Investigated & uncovered issues causing slow server start in local development; Reduced the application startup time from over 350 sec to **<70 sec**, leading to an optimized workflow and vastly improved DX.

PROJECTS

Bulletin Board (C, C++)
- A multi-threaded, distributed TCP network server written in C++ using the **POSIX API** to allow users to store and retrieve messages. Incorporated concurrency management (mutexes & condition variables), thread pre-allocation and signal handling.
- Designed, implemented & tested an application protocol end-to-end for the **2PC** atomic consensus algorithm.

URL Shortener (Python, FastAPI)
- Provides a **100%** secure, reliable mechanism to reduce the number of characters in a URL, making it easier to read, remember & share. Utilized **Redis** caching to enhance performance, resulting in **50%** reduction in response times for URL retrieval.
- Successfully handled edge cases, including invalid URLs, leading to a **95%** decrease in error rates. Reduced latency by **30%** by tuning database queries and employing serverless cloud solutions such as **DocumentDB** & edge functions.

EDUCATION

Bishop's University   **Canada**
Masters in Computer Science (GPA 94.6/100)   *September 2021 – June 2023*

Birla Institute of Technology and Science, Pilani   **India**
Bachelor of Engineering in Computer Science (GPA 7.1/10, First Division)   *August 2016 – July 2020*