

# MAHESH DHINGRA

## SOFTWARE ENGINEER

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### TECHNICAL SKILLS

Languages: Python, Javascript, Typescript, Go, Rust

Backend: FastAPI, Django, Typescript, Express.js, Axios, NodeJs, BunJs, JQuery

Frontend: React.js, Next.js, Electron.js, Three.js, React Native, shadcn/ui, Tailwindcss

Databases & DevOps: PostgreSQL, MongoDB, Redis, Docker, Prisma

Extras: Figma, Canva, Photoshop, Postman

### PROFESSIONAL EXPERIENCE

#### Freelancing — Software Developer

March 2020 - Present

- Develops innovative software solutions that help businesses streamline their operations.
- Build applications that improve efficiency, scalability, and user experience.
- Assist companies in adopting modern technologies to stay competitive in the market.

### PROJECTS

#### YTube - Clone

Aug 2024 – Mar 2025

TypeScript & Next.js platform: Recreated core YouTube features including video uploads, real-time comments, and user-tailored recommendations. Leveraged HLS for adaptive streaming and Docker-based microservices for scalable deployment. Performance Focus: Implemented Redis caching and Prisma for minimal latency across concurrent stream

#### PyX – Custom Python Subset Interpreter

Aug 2024 - Mar 2025

Rust Compiler & Lexer: Converts Python source into tokens using a robust lexer, builds an AST, and translates it into a custom IR. Executes the IR with a modular VM, laying the groundwork for future JIT optimizations. Performance Focus: Includes built-in execution timing for rapid performance insights.

#### Gramify – Instagram-Style Social App

May 2024 – Nov 2024

React.js & TypeScript application: Built a photo-sharing platform with Stories, Reels, and ephemeral posts. Implemented on-the-fly image downsampling to reduce bandwidth usage. Performance Focus: Optimized PostgreSQL queries via Prisma indexing, achieving rapid feed generation and seamless user experiences.

#### X-treme – Real-Time Microblogging Clone

Dec 2023 – Jul 2024

React.js & TypeScript microservices: Developed a live-feed platform featuring trending topics, mentions, and AI-driven content moderation. Deployed with Docker and Node.js for horizontal scalability. Performance Focus: Adopted an event-driven architecture (Redis Pub/Sub) to handle high throughput with negligible downtime.

### ADDITIONAL INFORMATION

**Languages:** English, French, Hindi

**Education:** Bits Pilani - CS Degree

**Awards/Activities:** Smart Hackathon India – 1st , Tech Innovators Challenge – 2nd, Code for Change Hackathon – 3rd, AI & ML Hackfest – 1st, Data Innovators Hackathon – 2nd, IoT & Robotics Challenge – 3rd