# PRANJAL GOYAL

### **Full Stack Software Engineer**

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### **SUMMARY**

Full Stack Engineer specializing in TypeScript, React, Node.js, and cloud platforms (AWS & GCP). Skilled in CI/CD, monitoring, and automation, with a focus on building scalable, high-performance applications. Passionate about system optimization, seamless deployments, and innovation in cloud-native development.

### **SKILLS & TOOLS**

Frontend



Backend



Databases



Cloud and DevOps



Tools & Methodologies

Git JWT	OAuth NPM	Vite	Shell Scripting

### **EDUCATION**

**Training Program** 

### **Digital Product School, Unternehmer TUM**

Feb 2025 - May 2025

Bachelors in Technology in Electronics and Communication Engineering

## National Institute of Technology, Hamirpur

May 2019 - May 2023

GPA - 7.61/10

### **COURSES / CERTIFICATIONS**

#### **Technical University of Munich**

<u>Digital Product Development From Scratch</u>

# The Hong Kong University of Science and Technology

<u>Server-side Development with NodeJS, Express and MongoDB</u>

### Postman

**REST API Expert** 

### MongoDB

**Good Parts of Non-Relational Database** 

### Meta Inc.

Introduction to Front-End Development

### **EXPERIENCE**

Software Engineer

### DPS, UnternehmerTUM GmbH

Feb 2025 - Present

München, Germany

- Built a digital marketplace for BMW's recycled plastics by developing a Next.js frontend and a Python FastAPI backend to list materials and fetch real-time prices.
- Automated price retrieval by implementing an AI agent with LangChain to gather rates from trusted sources.
- Improved scalability and maintainability by leveraging TypeScript, React Query, and TailwindCSS in the frontend.

Full Stack Engineer (Full Time)

### The Homework App

May 2023 - January 2025 (1 Year 9 Months)

Bengaluru, India

- Architected and developed MathAl, an educational application using Next.js and GraphQL, delivering personalised learning experiences to 10,000+ students
- Engineered assessment components leveraging LLM frameworks (LangChain and Groq API), increasing assessment accuracy by 35%
- Led migration from admin-secret to RBAC authentication system, implementing refresh and session tokens for enhanced security.
- Delivered critical features under tight one-week deadlines, impacting user satisfaction metrics by 28%
- Implemented OpenTelemetry for application monitoring, reducing production issue response times by 40%

# Backend Engineer (Contract)

### Circlone

Aug 2022 - Jan 2023 (6 Months)

London, United Kingdom (Remote)

- Designed and implemented scalable backend systems from scratch using Node.is, achieving 99.9% uptime using PM2 process manager.
- Created serverless API architectures using Azure, reducing operational costs by 35% compared to traditional deployments
- Implemented comprehensive security measures that prevented 100% of unauthorized access attempts
- Designed database schema using PostgreSQL with Prisma ORM, optimizing data retrieval performance by 45%
- Utilized React Query for efficient frontend data fetching, decreasing load times by 30%

# Front-end Engineer (Intern)

### **Shipsy**

May 2022 - July 2022 (3 Months)

Gurugram, India

- Developed cross-browser, responsive application features using ReactJS, ThreeJS, and GSAP, improving user engagement metrics by 25%
- Implemented Stripe API payment processing using React Hooks, increasing payment conversion rates by 15%
- Built real-time chat functionality with WebSockets, enhancing customer satisfaction scores by 32%
- Worked closely with the back-end team to ensure seamless integration of backend services with the user interface.
- Improved Core Web Vitals metrics (LCP, FID, CLS) to meet Google's recommended thresholds, enhancing user experience and boosting SEO rankings by 15 positions

### **LANGUAGES**

English: Fluent German: Basic (A2) Hindi: Native

### PUBLICATIONS/BLOGS

IEEE 2nd International Conference on Integrated Circuits and Communication Systems

<u>ParkSmart: Leveraging Neural Networks for</u> <u>Predictive Parking in Smart Cities</u>

### **Personal Blogs**

<u>Seamless Auth System Migration with</u> <u>Supertokens</u>

Meta Pixel - A Guide to User Tracking

Why and What is SHELL?

<u>How to Ensure Your Websites Ranks on Google</u>

Know your user like never before using Navigator API

#### LFX Foundation

<u>AIFAQ - Best Practices for Front-end of an</u> Agentic Agent

### **ACHIEVEMENTS**

- Runner-Up in GitHub SPEC Hackathon 2022.
- Postman Student Expert for RESTful API testing and development.
- Active contributor to Hackertoberfest 2021, 2022, and 2023, annually organized by GitHub.
- Co-authored a research paper in ICICACS-2024 on machine learning applications in parking systems.
- Secured a rank of 3 out of 50+ teams in SPEC MLH Hackathon, a Coding Competition organized by SPEC NITH in partnership with MLH.
- Web Secretary of college annual website built on top of MERN stack for both technical and cultural fest.

### **PROJECTS / FREELANCE WORKS**

### **Coding Classroom**

Source Code

- A full-stack application facilitating real-time code collaboration. Users can join rooms, each equipped with a code editor
- Utilised Socket.IO for room creation and real-time editor interaction, React.js for the frontend, Node.js with Express ensuring cross-platform compatibility and seamless integration the backend socket server.
- Implemented Codemirror to create an interactive and collaborative coding platform, allowing multiple users to code together in real-time through the integrated sockets.
- Designed custom rooms for enhanced user experience and privacy with the help of UUID.

### **SourcingXpress**

Live Deployed

- Enhanced user experience by enabling real-time profile tracking with WebSockets and React Query, ensuring job seekers receive instant updates on recruiter actions.
- Optimized platform efficiency by designing a scalable MongoDB and Redisbacked architecture to handle high traffic and data retrieval.
- Enabled free job postings and candidate downloads by implementing a secure authentication and access control system in NextAuth and Firebase.
- Improved hiring workflow by creating an intuitive React-based UI with TailwindCSS, ensuring a seamless experience for employers and recruiters.

### Nimbus NITH Source Code

- Developed a Web Application to send out 1,00,000 emails efficiently using Amazon Simple Email Service and SMS using Twilio to the registered candidates during fest days.
- Utilized Framer Motion and GSAP for creating smooth UI animations and effects, three.JS for 3-D model rendering improving the overall app aesthetics and engagement.
- Designed and implemented a database schema using PostgreSQL on top of Prisma ORM, ensuring efficient data storage and retrieval using React Query at the frontend.
- Implemented RESTful APIs using Node.js and Express, ensuring efficient communication between the application and backend server.

### **VOLUNTEERING EXPERIENCE**

Vice President of Art & Cultural Activities

### Hill'ffair NIT Hamirpur

Aug 2021 - May 2023

Hamirpur, India

- As a pivotal member of a 14-person team, spearheaded the conceptualization and successful execution of Hill'ffair 2022 "Mirage- Oasis of Mystique," North India's premier Cultural Festival.
- Contributed significantly in media and marketing strategies to expand the festival's outreach. This resulted in increased visibility, higher attendance, and augmented funding for the festival's success.
- Led a dynamic, 2-tier team of 50 dedicated students, orchestrating the conception and execution of captivating pro shows that captivated a crowd of 10,000 attendees.

Web Secratory

### **Pixonoids**

January 2021 - May 2023

Hamirpur, India

- Contributing to the design and development of the annual technical and cultural website.
- Collaborated with a team of UX designers and deployment teams to create a website showcasing the best of the college's events.
- Contributed to overcoming technical issues and creative differences throughout the project, ensuring smooth execution.
- Played a key role in the successful launch of the website, highlighting the college's technical and cultural events.