Dev Panchal

AI & Data Analytics · Full-Stack Web Developer

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SUMMARY

Final-year B.Tech CSE (AI & Data Science) student who has completed a 3-month Web Development internship at ANK Design & Automation Solutions, building the company's internal business management system, now in production. Combines full-stack engineering (Next.js, TypeScript, PostgreSQL, Flutter) with data analysis (Python, pandas, SQL, Power BI) and applied AI (Gemini API, LLM agents, RAG). Ranked **#8** among Coding Ninjas learners at Vibe2Ship, India's largest vibe-coding hackathon.

TECHNICAL SKILLS

AI & GenAI	Google Gemini API · LLM integration & prompt engineering · RAG · AI agents & multi-agent systems · IBM watsonx Assistant · Responsible AI
Data Analytics	Python (pandas, NumPy, Matplotlib, Seaborn, Plotly) · SQL · Power BI · Excel · Streamlit · EDA · data cleaning & validation · statistical testing
Web Development	Next.js 15 · React 19 · TypeScript · JavaScript · Node.js / Express · Tailwind CSS · REST APIs · PWAs · HTML5 / CSS3
3D & Motion	Three.js · React Three Fiber · WebGL / GLSL shaders · GSAP
Databases & Cloud	PostgreSQL · Supabase (Auth, Row-Level Security) · Firebase · SQLite · Vercel · Cloudflare Workers · Google Cloud Run · Git / GitHub
Mobile & Languages	Flutter / Dart · Python · TypeScript · JavaScript · SQL · Java · C

EXPERIENCE

Web Development Intern — ANK Design & Automation Solutions LLP
Aug 2026 – Oct 2026

Vadodara, Gujarat · Built the company's websites and internal software · Next.js · TypeScript · Supabase (PostgreSQL) · Vercel

- Built **ANK Track** end to end: the company's internal inquiry-to-order management system, live in production and installed by staff as an app on phone and desktop. It covers inquiries with follow-up alarms, orders and payments, R&D budgets, IP renewals, clients, meetings and quality checks.
- Designed a **35+ table PostgreSQL** database across 45 migrations, with row-level security on every table and trigger-maintained ledgers. GST, totals and balances are calculated by the database, never typed by hand.
- Built the billing module for quotations, tax invoices and delivery challans: GST per line, gapless numbering that restarts every financial year, and print-ready PDFs generated on the server with headless Chromium.
- Added **fingerprint attendance**. Biometric devices send punches over HTTPS, a rules engine works out present, half-day, late, overtime and missed punches, and admins download a monthly Excel register.
- Built the **analytics reports**: cohort-based inquiry conversion, monthly order value, payment aging and loss reasons.
- Led a **security review** of the live system: patched a critical Next.js vulnerability, moved role permissions into the database and blocked forged API writes, then verified on live data that no record had changed.
- Client websites: audited a prospect's site (21 findings ranked by severity) and built the pitch concept with a **real-time three.js 3D configurator**, a to-scale site planner and a quote form. Built the agency's 5-tier website rate card with a cost calculator and printable proformas, and a sample online store that personalises products live in English, Gujarati and Hindi.

PROJECTS

PE Daily Report — Stock & Ledger Software for Panchal Enterprise
Oct 2026

Real client (industrial-gas distributor) · Android app + PC web app · Flutter · Dart · Supabase · SQLite · Cloudflare Workers

- Replaced the business's paper cylinder register with software used every day: supply, empty, cash and bill entries, daily stock, cylinder balances for each company, filling-plant and damaged-cylinder tracking, and daily and register PDF reports.
- Made it **offline-first**, so entries made at the godown are stored in SQLite and sync to the cloud when the internet returns. Shipped **15 releases** with in-app updates, and moved data from phones on the old version to the cloud automatically.
- Added Tally-style keyboard-only entry on PC. Secured it with row-level security, a change history nobody can edit, encrypted sessions and strict security headers. Automated tests cover the stock rules, ledgers, sync and the full app flow.

Supply-Chain Profitability Analysis — APL Logistics Aug 2026

Data Analytics · Python · pandas · Plotly · Streamlit · **Live Dashboard** · **GitHub**

- Analysed **180,519 order lines** (20,261 customers, 164 countries, $31.64M revenue) to find which customers, products and regions make money.
- Found that **18.69% of order lines lose $3.71M** and one customer in five is loss-making (−17.01% margin), and proved discounts are not the cause (discount–margin correlation: −0.0015).
- Delivered a tested data-cleaning pipeline (11 checks), a 17-page research paper, an executive summary and an interactive dashboard.

Smart-Factory Process Health Diagnostics — Thales Group Dataset Aug 2026

Data Analytics · Python · pandas · Seaborn · Streamlit · **Live Dashboard** · **GitHub**

- Analysed **100,000 sensor records** from 50 machines over 69 days to check machine health before building a predictive-maintenance model.
- Showed that the target label is a **3-line threshold rule** matching 99.998% of labels, and that no sensor pair correlates above r = 0.0075 once tested for significance. This proved the data was synthetic and stopped a model whose accuracy would have been meaningless.

KAAM KARO — AI-Powered Deadline Survival App Jul 2026

Vibe2Ship Hackathon, ranked #8 · React 19 · TypeScript · Gemini API · Node.js · Firebase · Cloud Run · **Live App** · **GitHub**

- An app in English, Hindi and Gujarati that uses the **Gemini API** to turn deadlines into day-by-day plans and rate each one live as Safe, At Risk, Critical or Overdue.
- Its autonomous **Rescue Mode** writes a recovery plan when a deadline turns critical. A local backup planner keeps the app working when the API is slow or rate-limited.

3D Portfolio & Live Business Websites 2026

Next.js · Three.js · React Three Fiber · GLSL · GSAP · **dev-panchal.vercel.app** · **Panchal Gases** · **Panchal Enterprise**

- Built a scroll-driven **WebGL portfolio** on one persistent Three.js canvas: all 3D is generated in code, with custom GLSL shaders and a GPU particle field of 350K points.
- Built and maintain two live websites for industrial-gas businesses, with a custom scroll-animation engine and WebGL shader backgrounds. Moved their contact-form email from SMTP to the Resend API.

EDUCATION

ITM SLS Baroda University — B.Tech, Computer Science & Engineering (AI & Data Science) 2023 – 2027

Vadodara, Gujarat · CGPA 6.79

Data Analytics Program — IIT Mandi TIH Live × Coding Ninjas (NSDC) Feb 2026 – Oct 2026

Modules: Analytics & Excel · Data Visualization with Power BI · SQL · Python for Data Analysis

ACHIEVEMENTS

- Ranked **#8 in the Top 15 Coding Ninjas learners** at **Vibe2Ship**, India's largest vibe-coding hackathon, hosted by Coding Ninjas with Google for Developers (2026).
- **Certificate of Excellence (Top Performer)** in both IIT Mandi TIH Live analytics modules: Analytics & Excel, and Power BI.

CERTIFICATIONS

Sep 2026 **Introduction to Big Data Tools** — Simplilearn

Jul 2026 **Vibe2Ship Hackathon, Top 15** — Coding Ninjas × Google for Developers

Jul 2026 **AI Automation & Intelligent Solutions Internship** — AICTE | IBM SkillsBuild

Jul 2026 **Make Agentic AI Work for You** — IBM SkillsBuild (AI Agents, Multi-agent Systems, RAG)

Jul 2026 **Intelligent Virtual Agents with IBM watsonx Assistant** — IBM

Jul 2026 **Improve Your Resume Writing with AI** — IBM SkillsBuild

Jun 2026 **Getting Started with Generative AI** — IBM SkillsBuild

Jun 2026 **Text Analytics 101** — Cognitive Class (IBM)

May 2026 **Data Visualization with Power BI** — IIT Mandi TIH Live × Coding Ninjas

Apr 2026 **Introduction to Analytics & Excel** — IIT Mandi TIH Live × Coding Ninjas

Apr 2026 **Introduction to Agentic AI & LLM Architectures** — Simplilearn

Jan 2026 **Data Analysis Workshop "Ignite the Future"** — M. S. University of Baroda