

Tanishq Jain

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SUMMARY

ML and systems engineer. A year and a half of DevOps at Bosch Global Software Technologies, a freelance full-stack platform in production, and my own products — VYRO and Baby — shipped through Jainav Infotech. Recent independent work in reinforcement learning, MLOps and probabilistic forecasting. Applying for a Master's in AI and ML (2027).

EXPERIENCE

Founder

2026 – present

Jainav Infotech Private Limited, Indore

- Founded a product company to build and sell my own software — MenuMesh, VYRO and Baby — and to build custom software for businesses.
- Specified and shipped the company's platform: product pages, Razorpay checkout, GST invoicing and a licensing API, in English and Hindi.

Freelance Full-Stack Developer

Jun 2025 – Apr 2026

MyCounselHub (remote)

- Sole engineer on a WordPress counselling platform with the Amelia booking system, across three services (mental health, dietetics and Ayurveda). Owned everything from requirements to SEO and handover.
- Wrote custom scripts that turn a successful payment into a Google Meet link, calendar events for the client and the counsellor, an invoice, and a reminder 30 minutes before the session.
- Integrated Razorpay, built a discount-coupon system, a free self-assessment tool and a counsellor onboarding flow, and designed the MySQL database for clients, counsellors and leads.

Associate Software Engineer

Jul 2023 – Jan 2025

Bosch Global Software Technologies, Bangalore

- Architected and maintained CI/CD pipelines for testing, building and deployment, cutting deployment time by 60% and raising availability by 20%.
- Led the move to Docker and Kubernetes autoscaling, raising scalability by 30%, cutting manual intervention by 60%, and saving about 20 hours of operations work a week.
- Built a custom Jenkins plugin and Python and Shell automation, cutting build times by 40% and saving about 20 hours a week.
- Built a docs-as-code workflow (DocHub, Sphinx with Graphviz and PlantUML diagrams) with CI/CD publishing kept in sync with releases.

Google Summer of Code Contributor

Jun – Sep 2022

PEcAn Project (open source)

- Selected for Google Summer of Code 2022 to work on "PEcAn in CRAN". I merged 15 pull requests that refactored PEcAn's R packages toward CRAN compliance: replacing an orphaned dependency, clearing R CMD check warnings, and breaking circular dependencies between packages.

SELECTED PROJECTS

Recent projects are built AI-native: I write the specs, make the architecture decisions and test the results; Claude Code writes much of the implementation.

Baby — voice assistant for Windows

Jun 2026 – present

- A voice pipeline (openWakeWord → Silero VAD → faster-whisper → agent → Kokoro TTS) and a 22-tool agent behind a deterministic allow/confirm/deny safety gate with an audit log.
- A router across four LLM backends (OpenRouter, NVIDIA NIM, Gemini, and a local Qwen 3.5 9B on Ollama); privacy-pinned and Hindi (Devanagari) turns stay on the local model.
- A public v6.0.1 installer, 1,037 automated tests, and a cloud first token at p50 1.2 s.

VYRO — low-footprint Windows hardware monitor

Sep – Oct 2026

- A Rust sensor engine running as a Windows service (PawnIO driver modules, NVML/NVAPI/ADL), with a Tauri 2 + Svelte 5 app: animated gauges, 7-day history, alerts, game frame rates and fan control.
- 0.46% CPU and ~125 MB of RAM with the window open (v0.2.0); an 11.6 MB installer; 11 releases in about three weeks, with auto-update.

Multi-objective RL for reservoir control

Jun 2026

- A custom Gymnasium environment (flood, supply, ecological flow); 8 PPO agents (Stable-Baselines3) trace a Pareto frontier against a rule-curve baseline.
- The balanced agent cut the flood penalty from 82.4 to 1.7 and the supply deficit from 194.7 to 183.4 (100 episodes); the rule curve stays Pareto-optimal on ecology.

Probabilistic forecasting with calibrated uncertainty

May 2026

- Reproduced DeepAR (GluonTS) on Beijing PM2.5 over 5 seeds, against seasonal-naive, ARIMA and ETS, with proper scoring rules.
- The most accurate model (CRPS 43.6 vs ARIMA 47.4) was also the most overconfident: its nominal 90% intervals covered 74%, and isotonic recalibration failed under the test period's shift.

Closed-loop MLOps with drift-triggered retraining

Apr 2026

- Evidently drift detection → retraining → an MLflow champion/challenger gate → a hot reload of the FastAPI service; Prometheus/Grafana monitoring; Docker and Kubernetes manifests.
- Realized F1 recovered from 0.27 to 0.78 on unseen batches after a synthetic shift, with no human in the loop.

Jainav Infotech platform

Oct 2026

- A Next.js 16 + Payload CMS 3 company site and store: Razorpay checkout, GST invoices, Ed25519-signed licence tokens, English and Hindi, and about 355 automated tests.

OPEN SOURCE

PEcAn · Google Summer of Code 2022 — 15 merged PRs helping get an ecological-forecasting toolbox ready for CRAN.

LitmusChaos — A merged PR moving ChaosCenter's hard-coded UI text into its translation file.

EDUCATION

B.E., Computer Science and Engineering

Aug 2019 – Jun 2023

Bangalore Institute of Technology (Visvesvaraya Technological University), Bangalore

- CGPA 7.77/10, First Class with Distinction
- Relevant coursework: Artificial Intelligence and Machine Learning, Data Mining and Data Warehousing, Application Development using Python, Design and Analysis of Algorithms, Data Structures and Applications, Probability and Statistical Methods, Database Management Systems.

SKILLS

ML & data — PyTorch, GluonTS / DeepAR, Stable-Baselines3 (PPO), Gymnasium, scikit-learn, statsmodels / pmdarima, pandas, MLflow, Evidently, DVC

AI applications — LLM routing (OpenRouter, NVIDIA NIM, Gemini, Ollama), RAG with sqlite-vec, Speech (faster-whisper, Silero VAD, openWakeWord, Kokoro), Browser automation (Playwright), OpenCV DNN

Systems & desktop — Rust, Tauri 2, Windows hardware APIs (NVML, NVAPI, ADL, PawnIO), Svelte 5, SQLite, Three.js

Web & product — TypeScript, Next.js, React, Payload CMS, PostgreSQL, Supabase, Tailwind CSS, FastAPI, WordPress & PHP, Razorpay

DevOps & cloud — Docker, Kubernetes, Jenkins, GitHub Actions, Terraform, Prometheus & Grafana, Cloudflare (Workers, R2, Turnstile), AWS, Azure, Oracle Cloud

Languages — Python, TypeScript / JavaScript, Rust, R, Go, Java, SQL, Bash

CERTIFICATIONS

Data Analysis with Python — freeCodeCamp, Feb 2022

Python (Basic) — HackerRank, Nov 2021

Azure Data Fundamentals — Microsoft, Mar 2021

Data Science and Analytics using Python and R — Knowledge Solutions India, Oct 2020

Learn Ethical Hacking From Scratch — Udemy, Jun 2020