Aarti Panchal

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Education

PES University 2024 - 2028
B.Tech in Artificial Intelligence and Machine Learning Bengaluru, India

Experience

C4GT 2026 DMP Fellow Jun 2026 - Present
Piramal Swasthya (PSMRI), AMRIT health platform Remote

- Sole engineer on the Angular 4 to 20 rebuild of the frontend for India's national 104 health helpline.
- **144 pull requests merged** (165 authored) across 6 AMRIT repositories.
- Rebuilt **116 components** with Tailwind CSS v4, signals and typed i18n, plus **7** role-based dashboards.
- Retired an end-of-life codebase carrying **184** npm-audit vulnerabilities.

Open Source Contributor Aug 2026 - Present
Mifos Initiative, Kubernetes Headlamp, Apicurio Registry Remote

- **38 pull requests merged** at Mifos: 23 in the React banking web app, 10 in mcp-mifosx (an MCP server that lets AI agents operate the Apache Fineract core banking system) and 5 in the Angular web app.
- **3 merged** in Kubernetes Headlamp (kubernetes-sigs, v0.46.0 release); **5 merged** in Apicurio Registry (Java).

Project Intern Jul 2026
Inverix, workforce-data startup Remote

- Shipped **three products in one month**, including the production voice-AI endpoint that runs worker exit interviews over real outbound phone calls.
- Cut voice response latency to **under 1.4s** by speaking before bookkeeping writes and pre-warming each call.
- Built Inverix Attend: Aadhaar-verified enrolment, on-device face check-in, offline-first PWA in **5 languages**.

Projects

Indic Booking Guard | *Python, LLMs (Groq, Ollama), Evals, Vercel* Live | GitHub

- Deterministic guard between a voice agent's LLM and clinic bookings for Hinglish and Kannada-English callers; dates are resolved in code, never taken from the model.
- Blind-tested on 60 unseen cases: **0 wrong bookings vs 13** for the model alone, and emergencies routed to a human **15 of 22 vs 6**.

extract-bench | *Python, Statistics, LLM-as-judge, GitHub Actions* Live | GitHub

- Reproducible benchmark of 6 HTML-to-text extractors used by web-reading AI agents, with 95% bootstrap confidence intervals, paired significance tests and a failure taxonomy.
- Validated on **181 human-labelled pages from 126 sites**; measured an LLM judge against the metric (Cohen's kappa **0.74**, 140 items, 2 models).

mcp-tenant-gate | *Python, MCP SDK, AI Security* Live | GitHub

- Multi-tenant security gateway for MCP servers: per-key tool and data isolation, poisoned-tool filtering, SSRF and path-traversal guards, PII redaction.
- Blocks **20 of 20** scripted attacks; prompt-injection eval on a public held-out dataset with a published error analysis; **150+ tests** in CI.

Achievements

- Selected for **IIM Bangalore NSRCEL's Women Startup Program** with Closeli (NRI eldercare platform).
- **2nd among all-women teams** in a 16-hour CTF (PESU ECC x Layer8); rank 113 of 200+ in the AWS AI League.
- Founded Khoj, a campus lost-and-found app (Next.js, Supabase); presented at NITK Incub8.

Technical Skills

Languages: TypeScript, JavaScript, Python, Java, SQL, HTML/CSS
Frontend: Angular 20 (signals, zoneless), React 19, Next.js 15, Tailwind CSS v4
Backend: Node.js, Express, FastAPI, REST APIs, SSE streaming, PostgreSQL, Supabase, Firestore, Redis
AI / LLM: LLM evaluation, LLM-as-judge, prompt-injection defence, MCP, LangGraph, Anthropic API, Groq, Qdrant
Tooling: Git, GitHub Actions, Docker, pytest, Vitest, Vercel, Render