# Purv Kabaria

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## SUMMARY

Final-year Computer Science student at NIT Surat who ships backend systems as an early engineer: founding engineer intern at Career Passport (resume-parsing queue, LLM prompt infrastructure) and freelance developer of PaperForge, an exam-paper generator used by 1,200+ students. Every project below is public, tested and benchmarked. Winner, Adani Powermind Hackathon; Rank 94 of 19,900+, Amazon ML Challenge 2026.

## EDUCATION

**Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat** 2023 – 2027
B.Tech, Computer Science and Engineering CGPA: 7.92 / 10

## TECHNICAL SKILLS

**Languages:** Python, TypeScript, JavaScript, Java, SQL, C++, Bash
**Backend:** Node.js, NestJS, Express, FastAPI, Django, Spring Boot, REST APIs, Server-Sent Events, JWT, RBAC
**Data & Queues:** PostgreSQL, MongoDB, Redis, BullMQ, Redis Streams, Prisma, Firestore, Supabase, Qdrant, Meilisearch
**Cloud & DevOps:** AWS (EC2, S3), GCP, Docker, Docker Compose, GitHub Actions (CI), MinIO, Vercel, Linux, Git
**Testing & AI:** pytest, JUnit, Testcontainers, LLM APIs, Langfuse, LangChain, RAG, embeddings, PyTorch
**Fundamentals:** Data Structures & Algorithms, System Design, DBMS, Operating Systems, Computer Networks, OOP

## EXPERIENCE

**Career Passport** | careerpassport.ai Remote
*Founding Engineer Intern* *May 2026 – Jul 2026*

- Cut resume parsing to a 12s median (30s p99) by moving it off the request path onto 30 concurrent BullMQ + Redis workers
- Prevented duplicate parsed records on worker crashes with a content-hash idempotency key and a unique Postgres constraint
- Shipped prompt changes without redeploys by moving 20+ LLM prompts into Langfuse, with the last good version in Postgres
- Automated job-form setup with import APIs that map Google Forms and other hiring sites into our schema (8 field types)

**PaperForge** | paperforge.in Remote
*Freelance Full-Stack Developer* *Jun 2025 – Jun 2026*

- Delivered an exam-paper generator for a coaching institute, now used by 1,200+ students, on Next.js, Firestore, GCP and Vercel
- Built the LaTeX-to-PDF service as a Docker image that compiles LLM-generated LaTeX in isolation, in English and Gujarati
- Added LLM question generation swappable to local models, and cached admin-dashboard reads in Upstash Redis

**Mercurium Analytics** | mercurium-analytics.ai Remote
*Software Development Engineer Intern* *Jul 2025 – Aug 2025*

- Built an admin-only Django + PostgreSQL CMS so non-engineers update the company website without a code change
- Caught regressions before release with a pipeline that re-tests the ID-extraction vision model on a hand-labeled holdout
- Replaced manual tracking of European regulatory news with a scheduled Firecrawl scraper that compiles an internal digest

## PROJECTS

**Distributed RAG** | GitHub | *FastAPI, Redis Streams, PostgreSQL, Qdrant, Docker, GitHub Actions* 2026

- Stopped jobs from being lost or duplicated on worker crashes by moving 2 queues to Redis Streams with idempotent writes
- Raised retrieval nDCG@10 from 0.706 to 0.724 on 300 held-out BEIR SciFact questions, tuning the rerank on a separate split
- Cut duplicate chunks in the top 5 from 17% to 0% with query-time content-hash dedupe; blocked repeat uploads by SHA-256

**AssetFlow** (team) | GitHub | *Next.js, TypeScript, Prisma, PostgreSQL, Redis, Meilisearch* 2026

- Enforced role-based access for 4 roles across a 20-table schema, re-checking each user's role from Postgres on every request
- Delivered real-time notifications across server instances via SSE and Redis pub/sub, replaying missed events on reconnect
- Built a debounced Ctrl+K search over 4 entity types in Meilisearch, scoped to the user's organisation inside the query

**Jobs180** | GitHub | *Java 21, Spring Boot, PostgreSQL, Redis, MinIO, Flyway* 2026

- Made API retries safe with Redis idempotency keys and atomic rate limits: 10 concurrent retries create exactly one record
- Backed the API with Testcontainers integration tests on Postgres 16 and Redis 7 that also fail on latency regressions

## ACHIEVEMENTS & LEADERSHIP

- **Winner**, Adani Powermind Hackathon (write-up) | **1st Runner-up**, WebOsmotic AI/ML Hackathon (write-up)
- **Rank 94** of 19,900+, Amazon ML Challenge 2026 (write-up) | **Top 10** (solo), WWT Unravel 2026 (write-up)
- **Top 15** (solo), NeurIPS 2026 EEG/EMG Foundation Challenge | **Top 100**, ZS Tech Challenge | 12x hackathon finalist
- **Competitive programming:** Codeforces Specialist (1415) | CodeChef 3-star (1669) | LeetCode max 1597, 503 solved
- **Chairperson**, Cutting Edge Visionaries (Fintech Club), SVNIT | **Developer**, ACM SVNIT Student Chapter