

Garvit Pandia

Systems Engineer & Independent Builder — developer tooling, climate & field data, creative web

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SUMMARY

Engineer of systems that keep their promises: distributed tooling, field-data pipelines, and interfaces with opinions. Six years of building across developer infrastructure, climate and ocean data, indie games, and boutique-web clients. Maintains 12 open-source repos (~9,800 combined stars), has shipped 46 projects end-to-end, and mentors first-time contributors for fun and for the health of the ecosystem.

EXPERIENCE

Systems Engineer (mid-level) — Cinderforge Labs - Lead the Crank scheduler (4.2M jobs/day); failed-run replay cut mean-time-to-debug 63%. - Designed the Crosscut lineage service — 4,200 tables, impact answers in 3 seconds. - On-call rotation lead; fleet-wide pages down 31% after the alert-hygiene pass.	May 2025 – present
Junior Software Engineer — Cinderforge Labs - Owned the Cairn metrics store: 1.2M points/sec on ARM, 14-month field uptime record. - Shipped container cold-start work: 41% faster starts, 26% fewer failed deployments. - Took the tracing service from 60% to 99.9% of teams onboarded.	Jun 2024 – Apr 2025
Research Engineer — Peregrine Deep (ocean data) - Leading sensor-fusion modeling for 14 coastal buoys (40k readings/day). - Designing an open dataset release — every number traceable to a public source. - Mentoring 2 marine-data interns.	Feb 2026 – present
Data Lead (contract) — Peregrine Deep - Shipped Kelp: coastal-acidification warnings up to 6 days early, 91% precision at 48 h. - Built the Kelpfield restoration dashboard for 3 marine NGOs.	Apr 2025 – Jan 2026
Network Engineer (contract) — Fernbank Networks - Deployed the Rapids pub/sub layer: 92% delivery under mobile network churn. - Tuned the Ferry relay for a pilot village — 99.1% same-day message delivery.	Sep 2025 – present
Founder & Engineer — Kite & Crane Studio 13 client projects; launched the studio product Scrapbook (4,100 paying households). - Accessibility bar: every shipped site passes WCAG AA, audited in CI.	Jul 2024 – present
Research Intern, Language Systems — Wrenbrook AI - Built an agent-eval harness that caught a 9% hallucination regression pre-release. - Designed the human-in-the-loop review flow for high-risk clinical flags.	Jan – May 2023
Teaching Assistant, Data Structures — Kandhari Institute of Technology Ran weekly labs for 160 students; rebuilt the lab manual — completion rate up 21%.	Jan 2023 – May 2024

SELECTED PROJECTS

- Harpoon** — distributed compile cache · Rust · gRPC · S3
68% median cache-hit rate across 200+ CI machines; cut cold CI 22 → 6.5 min. 3.2k stars, 48 contributors.
- Rhizome** — self-healing distributed storage · Go · CRDTs · gossip
Survives 30% node churn with zero data loss; 2.6k stars, 1,100 forks; powers 4 apps' sync layers.

Aphelion — orbit visualization with real math · TypeScript · WebGL
1,400 catalog bodies, 12 interactive lessons; 1.9k stars; cited in 3 astro-education roundups.

Inkstone — variable-font playground · TypeScript · WebGL
Real-time axis scrubbing at 60 fps; 1.5k stars, 46 contributors; 900+ community axis entries.

Kelp — coastal-acidification early warning · Python · scikit-learn · TimescaleDB
6-day pH-anomaly lead time at 91% precision; 40k readings/day from 14 buoys; 3 real events flagged in 5 months.

Vellum — a writing tool that feels like paper · TypeScript · CRDTs
Offline-first, 11k monthly writers; 1.2k stars; a small press publishes from it.

Shortwave — audio over 4 kbps links · C++ · Opus
94% intelligibility at 40% packet loss; used by field teams to sync voice logs over radio.

Cartographer — agent eval harness · Python · Pydantic
1,400 scenario runs in 11 minutes on CI; caught a 9% hallucination regression before release.

SKILLS

Languages: TypeScript 94 · JavaScript 96 · Python 93 · Rust 84 · Go 78 · C++ 72 · SQL 88 · Bash 82
AI/ML: PyTorch 86 · ONNX Runtime 84 · retrieval systems 88 · evaluation harnesses 90 · edge inference 84 · time-series forecasting 86
Frontend/Creative: React 93 · Next.js 88 · Three.js 85 · WebGL 80 · Canvas 2D 90 · CSS motion 94 · web accessibility 88 · design systems 86
Systems/Cloud: Linux 88 · Docker 86 · Kubernetes 78 · PostgreSQL 90 · Redis 84 · ClickHouse 80 · NATS 76 · gRPC 82 · Terraform 80 · AWS 82 · observability 86
Data: Pandas 90 · streaming aggregation 86 · geospatial (PostGIS, GDAL) 80 · D3 85 · ETL design 88
Hardware & Field: Arduino/ESP32 78 · LoRa & RF 74 · sensors & telemetry 82 · field documentation 86

EDUCATION

B.Tech Computer Science & Engineering — Kandhari Institute of Technology, Jalandhar 2020 – 2024
CGPA 8.9/10 · Institute Gold Medal · Dean's List 5 semesters · minor in mathematics · exchange semester, Wadsworth Polytechnic, Manchester (Fall 2022)

HIGHLIGHTS

- 6 hackathon wins (2021–2025); 3 papers (2 peer-reviewed, 1 workshop); 9 speaking engagements.
- 176 OSS PRs merged; 31 first-time contributors mentored; GitHub Trending featured 3× in 2024.
- Certifications: AWS Developer – Associate · CKAD (CNCF) · ISC2 Certified in Cybersecurity · Terraform Associate.