

Chanikya Gajjarapu

Founding Product Engineer · India, working remote

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SUMMARY

Founding Product Engineer at Flexrad, shipping production healthcare software end to end for enterprise clients: REST APIs, async job pipelines, and an image-serving backend for gigapixel medical slides used daily by pathologists. Two-time Samsung hackathon winner. Strong in Python backend services (FastAPI, Flask), PostgreSQL, and designing APIs consumed by web clients, with the product ownership to take features from spec to deploy.

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Java, C++, SQL
Backend and systems: FastAPI, Flask, Spring Boot, REST API design, Celery, RabbitMQ, JWT auth, Docker, Nginx
Databases and cloud: PostgreSQL, AWS (EC2, S3, Lambda, Textract, CloudFront), GCP (Cloud Storage, signed URLs), Linux, Git
AI and ML: LangChain, LLM orchestration, AI agents, MCP, RAG, PyTorch, BioBERT, SciSpacy, YOLOv8, OpenCV
Frontend: React, Vite, Tailwind CSS, shadcn/ui, OpenSeadragon

EXPERIENCE

Founding Product Engineer Dec 2025 - Present
Flexrad (flexreport.ai), Remote FastAPI · Flask · Celery · RabbitMQ · PostgreSQL · React · TypeScript · GCP · AWS

DigiPath Insights: digital pathology platform, built for 4baseCare (precision-oncology client)

- Own the platform end to end (backend and frontend) in a two-engineer team, with sprint planning, formal code review, and a develop → staging → main release workflow.
- Built FastAPI services that serve gigapixel whole-slide images from pre-generated deep-zoom tile pyramids (pyvips, OpenSlide), holding tile latency near 30 ms under concurrent load versus 3 s+ with on-demand generation.
- Streamed multi-GB pathology slides (Aperio SVS) to the browser over HTTP Range requests against signed Google Cloud Storage URLs; viewport-only tile fetching keeps a full viewing session under ~30 MB of transfer.
- Integrated the client's production OncoBench360 REST API end to end (JWT login, per-patient pathology feeds, tumor-cellularity results), replacing every mock route before merge.
- Built a token-based launch flow so hospital systems open the viewer from their own apps with no second login.
- Built the viewer in React + TypeScript over OpenSeadragon, with a custom SVG annotation and measurement engine and tumor-cellularity heatmaps rendered exactly from model grid output (no client-side interpolation, because it is a diagnostic tool).

FlexReport: AI medical report simplification platform

- Engineered an async LLM pipeline (Flask, Celery, RabbitMQ, PostgreSQL) that runs medical reports through Llama 3.3 70B, extracting 50-200+ medical terms per report with patient-friendly explanations.
- Built a multi-provider OCR fallback chain (PDFPlumber, AWS Textract, Gemini 2.5 Flash) for 100% document support, including fully scanned PDFs.
- Designed a hybrid NER pipeline (BioBERT, SciSpacy, LangChain) with confidence scoring, plus vision-based detection of report boundaries and types within multi-page documents.
- Developed the React + TypeScript frontend with real-time task progress, Razorpay payments, and PDF export.

IT Consultant Intern Jul 2025 - Aug 2025
MSN Laboratories, Hyderabad, India Google AppSheet · Apps Script · OutSystems

- Digitized logistics workflows with Google AppSheet and Apps Script, cutting approval turnaround time by 60%.
- Modeled 13 plant locations for driver routing with role-based row-level security; prototyped enterprise dashboards in OutSystems.

Co-founder and CTO Feb 2024 - Nov 2025
Nature's Retreat (organic products e-commerce), Manipal, India AWS CloudFront · PhonePe · Stripe

- Bootstrapped e-commerce infrastructure on AWS CloudFront with PhonePe and Stripe payments, handling 250+ monthly transactions.
- Led the engineering roadmap and ran Scrum for fast, stable feature delivery.

PROJECTS

ARIA: Autonomous Browser Agent <i>Winner, Samsung Web Agent Hackathon · Lead engineer</i>	2025 TypeScript · Manifest V3 · LLM agents
• Built a Chrome extension that turns natural-language voice or text commands into autonomous multi-step browser actions through LLM agent loops. • Engineered dual-mode intelligence: heuristic patterns for popular sites plus LLM reasoning for arbitrary pages.	
OD-MAS: On-Device Multi-Agent Security <i>Winner, Samsung EnnovateX AI Challenge · Lead engineer</i>	Sep 2025 Android · Chaquopy · Neural ensemble
• Designed a tiered security architecture (Tier-0 Mahalanobis, Tier-1 neural ensemble) with confidence-aware hysteresis for on-device anomaly detection. • Deployed privacy-preserving behavioral biometrics on Android via Chaquopy, with real-time decisions under 200 ms and no cloud data transfer.	
Secure Drone System for Defense <i>2nd Runner-Up, Quest Global INGENIUM'25 · Team lead</i>	Mar 2025 YOLOv8 · MAVLink · GPS resiliency
• Architected a real-time YOLOv8 vision pipeline for object detection, with risk overlays in the ground control station. • Hardened communication links with MAVLink encryption and anti-jamming GPS resiliency using multiple navigation signals.	
Autonomous AI Agents Suite <i>MCP + Pipedream</i>	Aug 2025 Gmail · LinkedIn · ElevenLabs · Twilio
• Built agents for Gmail triage, LinkedIn posts, and voice calls using MCP and LLM APIs, with ElevenLabs TTS and Twilio Programmable Voice.	
SecureShare: Secure File Sharing Service <i>Personal project</i>	2024 Tokenized access · Local and S3 adapters
• Built a lightweight file-sharing service with short-lived tokenized links, least-privilege design, and pluggable storage adapters (local, S3).	
Enterprise Student Management System <i>Full-stack Spring Boot</i>	Dec 2024 Spring Boot · REST · Analytics
• Delivered secure REST APIs, an automated grade calculation engine, and database queries tuned for large student datasets.	

EDUCATION

B.Tech in Information Technology <i>Manipal Institute of Technology, Manipal</i>	2022 - 2026
HSC (PCM) <i>Narayana College</i>	2021

AWARDS

- **Winner**, Samsung Web Agent Hackathon (ARIA), 2025
- **Winner**, Samsung EnnovateX AI Challenge (OD-MAS), 2025
- **2nd Runner-Up**, Quest Global INGENIUM'25 Hackathon, 2025
- **World Rank 4**, NASA Space Settlement Contest, 2017
- **National Inline Hockey Champion** (Team Andhra), 2014-2017

CERTIFICATIONS

- Foundations: Data, Data, Everywhere, Google (2025)
- Introduction to Front-End Development, Meta (2025)
- Advanced Prompt Engineering Techniques, LinkedIn Learning (2023)
- C: Data Structures, Pointers, and File Systems, LinkedIn Learning (2023)

LEADERSHIP

- **Team Lead**, INGENIUM'25 Hackathon: led a 3-member team to a podium finish; coordinated scope, timelines, and the live demo.
- **Lead Engineer**, OD-MAS (Samsung EnnovateX): owned the system architecture and final presentation.
- **Startup Development Executive**, E-Cell, MIT Manipal.
- **Youth Ambassador**, Viral Fission.