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Vinit M Palangappa | Product Engineer

SKILLS

Languages: Python, TypeScript, Dart, Kotlin, SQL

Backend: FastAPI, asyncpg, PostgreSQL, Alembic, Firebase/Firestore

Frontend: Next.js, React, Ant Design, Tailwind, React Query, Zustand

Mobile: Flutter, Android

Infrastructure: GCP (Cloud Run, Cloud SQL, Secret Manager, Cloud Scheduler, Cloud Armor), Docker, Cloudflare, CI/CD

Domain: SaMD / TGA regulatory, healthcare data privacy, system design

EXPERIENCE

Peak Medical, Remote – Product Engineer

June 2025 – September 2026

Product engineer on BIBO, a TGA-registered Software as a Medical Device for post-operative rehabilitation. Owned features end to end across a Next.js dashboard, FastAPI/Postgres backend, and Flutter patient app on GCP.

Architecture

- Designed the data boundary between Postgres and Firestore across the clinician dashboard and Flutter patient app keeping clinical records of truth in Postgres and real-time patient state in Firestore – and cut Firestore read costs 25% by fixing poller scan patterns and denormalising hot paths.
- Architected the clinical decision system as a standalone Next.js service on a separate domain with an idempotent write path, isolating an externally-exposed surface from the main dashboard while keeping approvals reconcilable with patient records.
- Choosing polling over WebSockets for approval-state propagation after connection-state bugs proved costlier than the latency they saved.

Product

- Took surgeon pathway approvals from clinical workflow to shipped system: scoped decision points with the CEO and clinical lead, chose SMS over an app login to match how surgeons actually work, and produced an auditable approval record for regulatory review. Scoping out deliverables based on immediate requirements and good to have considering the tech debts of the existing systems and making tradeoffs based on the things that were built.

- Translated clinician feedback into the dashboard's information architecture- patient lifecycle actions, ROM measurement captures, user capture decision.

Engineering

- Built the clinical decision capture system end to end: Twilio SMS delivery, idempotent approval endpoint, and a data model that survives duplicate submissions and retries.
- Established Alembic migration history for a live production database with no prior versioning and reconciled drifted dev and prod schemas, making schema change reviewable and reversible.

Infrastructure & security

- Stood up an isolated staging environment (Cloudflare DNS, GCP load balancer with NEG's, Cloud Armor, locked Cloud Run ingress) so releases could be validated against production-like conditions before reaching patients.
- Led remediation of 3 security findings – committed credentials, plaintext secrets, unauthenticated endpoints – migrating the platform to Secret Manager and hardening Cloud Run against bot traffic.

Products: [Healthcare Professionals Dashboard](#), [BIBO app](#)

Projects: [Investor demo](#)

Creo IT Private Limited, Bengaluru – *Application Developer*

September 2023 – June 2025

- Shipped features on [iBreastExam](#) and [CervAIcal](#), medical screening apps deployed across countries with 300K+ users, working within the constraints of regulated clinical software.
- Held a cross function role in optimising existing projects and migrating the frameworks of a few products.
- Led migration of [Urbanaut](#) from native code to flutter, saving development resources and maintenance of the products.

Products: [iBreastExam](#), [CervAIcal](#), [Urbanaut](#).

Projects: [RAG Project](#), [Mail Sender](#).

Peppermint Robots, Pune – *Member of technical staff*

July 2022 – April 2023

- Worked on internal tools related to the robotics team.
- Built a web portal to manage the product lifecycle providing visibility to the end stake holder.

EDUCATION

Vellore Institute of Technology, Vellore – *M.Tech*

MONTH 2021 – MONTH 2023, Vellore

Circuital branch degree