

# SANTO SUNNY

Full-Stack Developer | AI & Mobile App Engineer | Game Developer

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## PROFESSIONAL SUMMARY

Electronics and Computer Science graduate with 1+ year of professional experience building production-grade web apps, mobile applications, AI-powered systems, and IoT hardware integrations. Shipped 10+ live projects spanning React Native, Next.js, FastAPI, Python ML pipelines, ESP32 firmware, Unreal Engine VR, and on-device AI. Winner of Smart India Hackathon 2023. Passionate about building fast, intelligent, user-centred software that solves real problems.

## TECHNICAL SKILLS

**Frontend & Web:** React, Next.js, TypeScript, JavaScript (ES6+), HTML5, CSS3, Tailwind CSS, JSS, Framer Motion, Responsive Design

**Mobile:** React Native (bare workflow), TypeScript, Zustand, React Navigation, BLE (react-native-ble-plx), Supabase, MMKV, SQLite, React Query

**Embedded / IoT:** ESP32 (Arduino Framework), NimBLE BLE, FreeRTOS (dual-core), PlatformIO, GATT Protocol, Hardware I/O, State Machines

**Backend & APIs:** Python, FastAPI, REST APIs, WebSockets, Supabase, SQLite, Cloudflare Workers, Cloudflare Tunnel, bcrypt, Pydantic

**AI & Machine Learning:** XGBoost, LightGBM, Scikit-learn, llama.rn (on-device LLM), OpenRouter API, FAISS, InsightFace, Sentiment Analysis, Walk-Forward Optimization

**Data & Storage:** DuckDB, SQLite, Supabase (Postgres), yfinance, pandas, NumPy, MMKV

**DevOps & Tools:** Git, GitHub, Netlify, Cloudflare Pages, Wrangler CLI, Pytest, Telegram Bot API, Windows Task Scheduler

**Game / 3D / Multimedia:** Unreal Engine 4 & 5, Unity, C++, C#, Blueprint, VR Development, Blender, Adobe Creative Suite, CGI

## PROFESSIONAL EXPERIENCE

**Jr. Developer** · Fredun Group

Mar 2025 – Present

- ▶ Built and launched [Fredun Pharma website](#) using HTML5, CSS3, and JSS — mobile-first, performant, and production-deployed on Netlify.
- ▶ Developed Fremor Visa web application in React, handling component architecture, routing, and multi-step form flows.
- ▶ Implemented feature updates and UI/UX enhancements for Sign Pharma's web platform (signpharma.com).
- ▶ Contributed frontend and integration work on the Adaro application build and Winter Solstice React web app.
- ▶ Produced high-quality CGI product videos using Blender and Adobe Creative Suite to support digital marketing campaigns.

**Freelance Web & Multimedia Developer** · Self-Employed

Aug 2024 – Nov 2024

- ▶ Delivered responsive web UI components and multimedia content (video, animation, graphics) for multiple clients.
- ▶ Created promotional videos with animations and special effects tailored to client brand aesthetics.

**Sales & Marketing Intern** · Fledon Engineering Works

Dec 2024 – Feb 2025

- ▶ Assisted in multi-channel marketing strategy; conducted market research and contributed to lead generation pipelines.

**VR Game Developer Intern** · Eduvance

May 2024 – Jul 2024

- ▶ Developed VR corporate team-building experiences in Unreal Engine 5; managed asset pipelines and multiplayer game logic.
- ▶ Collaborated with design and technical teams to prototype, iterate, and ship within sprint timelines.

- ▶ Managed digital marketing for an all-terrain vehicle manufacturing team; grew Instagram engagement by 15%.
- ▶ Secured external sponsorships through compelling pitch decks and presentations.

## PROJECTS

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### DogVita — Smart Wearable Dog Health Monitoring System

2025

*Tech: React Native (bare), TypeScript, Zustand, Supabase, BLE (react-native-ble-plx), llama.rn, Next.js, Tailwind CSS, Recharts, Cloudflare Pages*

- ▶ Full-stack IoT health monitoring system: React Native app connects to an ESP32-S3 BLE collar for real-time heart rate, GPS geofencing, activity, sleep, and environmental tracking. CRM live at [dogvita-crm.pages.dev/dashboard](https://dogvita-crm.pages.dev/dashboard).
- ▶ Integrated on-device generative AI assistant powered by llama.rn — runs GGUF models (Llama 2, Mistral 7B) locally for offline symptom checking, breed-specific diet advice, and health Q&A with voice I/O.
- ▶ Architected 7 Zustand stores (dog, health, BLE, tracking, alerts, settings, chat) with AsyncStorage persistence; full Phone + OTP auth flow via Supabase.
- ▶ Built custom BLE packet parser for binary frames across Heart Rate (0x180D), GPS, Temperature, Battery (0x180F), and Activity GATT service UUIDs.
- ▶ Shipped companion Next.js CRM dashboard with Recharts analytics, subscription monitoring, and alert management.

### Steady Hands Arena Pro — IoT Tournament Management System

2025

*Tech: React Native CLI (TypeScript), ESP32 (Arduino/NimBLE/FreeRTOS), PlatformIO, Zustand, React Query, MMKV, SQLite, react-native-ble-plx, Material Design 3, Kotlin (native audio module)*

- ▶ Built a production-ready hardware-software tournament system for the Buzz Wire game: ESP32-WROOM firmware communicates over BLE GATT with an Android app for real-time touch detection, scoring, and event management.
- ▶ Engineered ESP32 firmware using FreeRTOS dual-core architecture — Core 0 runs the NimBLE BLE stack while Core 1 handles touch detection (50ms debounce, dual-pin GPIO validation) and game state machine (IDLE → WAITING\_START → GAME\_ACTIVE → GAME\_FINISHED).
- ▶ Designed full BLE GATT protocol: Command characteristic (START\_GAME, STOP\_GAME, RESET, PING) and Event characteristic (TOUCH count, START\_LOOP, FINISH\_LOOP, GAME\_FINISHED with ms timing, HEARTBEAT keepalive every 5s).
- ▶ Built Android app with 5-layer architecture (UI → Feature → Core → Native → Platform): player management, leaderboard (lowest time + fewest touches ranking), CSV/PDF export, soft-delete audit log with bcrypt admin auth, and native Kotlin audio module for low-latency Bluetooth speaker playback.
- ▶ Implemented offline-first storage split: MMKV for settings/session, SQLite with repository pattern for players, attempts, and audit log; full database backup/restore with checksums.

### St. Thomas Football Fest 2026 — Festival Website + AI Face Search

2025 – 2026

*Tech: Next.js 16, TypeScript, Tailwind CSS v4, Framer Motion, FastAPI, Python, SQLite, FAISS, InsightFace, React, Cloudflare Pages/Workers/Tunnel, Telegram Bot API*

- ▶ Premium dark-themed festival website live at [st-football-fest-vasai.pages.dev](https://st-football-fest-vasai.pages.dev) — cinematic hero, animated sponsor tiers, live countdown, and Instagram feed.
- ▶ Built AI-powered face search system ([face-search.pages.dev](https://face-search.pages.dev)): upload a selfie, match faces across event photos using InsightFace + FAISS (512-dim embeddings), paginated results (20/page), and photo claim flow.
- ▶ Serverless Telegram bot on Cloudflare Workers (webhook mode, always-on) for /start, /claim, /events; async embedding worker + Telegram storage worker with batch upload reliability (5 per batch, 2 retries).
- ▶ Full Cloudflare infrastructure: Pages (static frontend), Workers (bot), Tunnel (FastAPI backend with permanent domain via gdastudios.in), SQLite WAL mode, GZip middleware.

### Neuronix — Web Platform

2025 – 2026

*Tech: React / Next.js, Tailwind CSS, Cloudflare Pages*

- ▶ Designed and deployed a live web platform at [neuronix-1uy.pages.dev](https://neuronix-1uy.pages.dev) with modern UI, responsive layout, and component-driven architecture.

### GalleryMind — Privacy-First Offline AI Android Gallery Organizer

2024 – 2025

*Tech: Flutter, Rust, Kotlin, ONNX Runtime, SQLite, HNSWlib*

- ▶ Architected a privacy-first Android gallery app using on-device AI for smart photo organization — zero cloud dependency, all inference runs locally.
- ▶ Built ML pipeline with ONNX Runtime for image classification and HNSWlib for approximate nearest-neighbor vector search; Flutter/Kotlin/Rust multi-layer architecture targeting real Android hardware.

### Trading Vault — AI-Powered NSE Stock Trading System

2024 – 2025

*Tech: Python, XGBoost, LightGBM, FastAPI, Streamlit, DuckDB, Telegram Bot API, yfinance, Pytest*

- ▶ Autonomous system scanning ~2,200 NSE stocks daily — BUY/SELL signals via Adaptive Bollinger %B (Walk-Forward Optimized, +15.41% avg OOS return, 79.6% profitable), RSI, MACD, multi-timeframe SMA.
- ▶ XGBoost/LightGBM ML ensemble + OpenRouter AI (Nemotron-120B) sentiment; risk engine: Kelly Criterion, -5% stop-loss, VaR (95%), correlation hedging; 506 tests, 50% win rate, +2.2% avg return.

### Vogofy — Live Web Platform

2024

*Tech: HTML5, CSS3, JavaScript*

- ▶ Frontend development and UX enhancements on [vogofy.com](https://vogofy.com) — a live production web platform.

### AsthaGraha — Educational Game (Indian Mythology)

Sep 2021

*Tech: Unreal Engine 4, C++, Blueprint*

- ▶ Lead designer and coder; presented at multiple tech fests. Invited to Akhil Bharatiya Shiksha Samagam 2023 (New Delhi) before PM Narendra Modi. 2nd Runner-Up, Mumbai Hackathon 2023.

### Chhatrapati Shivaji Maharaj Open World Game — AAA Prototype

2024

*Tech: Unreal Engine 5, Blueprint, 3D*

- ▶ Built a AAA-style open-world prototype in Unreal Engine 5 inspired by the era of Chhatrapati Shivaji Maharaj.

## ACHIEVEMENTS

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- ▶ Winner — Smart India Hackathon 2023: Led team to build a nationally recognized educational game.
- ▶ 2nd Runner-Up — Mumbai Hackathon 2023: Recognized for innovation with AsthaGraha.
- ▶ Judge — HackOver 4.0 (2023): Evaluated submissions on creativity, technical depth, and social impact.
- ▶ Akhil Bharatiya Shiksha Samagam 2023: Presented at national summit attended by PM Narendra Modi.
- ▶ SIH Hackathon Mentor: Guided competing teams in technical strategy and project execution.

## LEADERSHIP & COMMUNITY

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- ▶ Secretary, IEEE CRCE Mumbai Chapter (Jul 2023 – Mar 2024): Grew member participation by 20%; organized workshops, seminars, and guest lectures.
- ▶ Advisor & Game Developer, GDA CRCE (Jul 2023 – Mar 2024): Mentored student developers; conducted Unreal Engine and programming workshops.
- ▶ Motivational Speaker, 'Student to Entrepreneur' (Aug 2024): Addressed 100+ students at Shree Narayan College of Commerce.

## CERTIFICATIONS

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- ▶ Game Development Certification — Unreal Engine (Sep 2020)
- ▶ Web Development Certification — HTML, CSS, JavaScript (Jan 2022)
- ▶ Entrepreneurship Certification (Feb 2023)
- ▶ Short Film Production Certification (Jun 2023)
- ▶ Canva Graphic Design Workshop Certification (Jun 2021)

## EDUCATION

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**B.E. — Electronics and Computer Science** · Fr. Conceicao Rodrigues College of Engineering, Mumbai May 2024

CGPA: 7.7 / 10

## LINKS & LIVE WORK

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- ▶ Portfolio: [santo-portfolio.framer.website](https://santo-portfolio.framer.website)

- ▶ GitHub: [github.com/MontageStark](https://github.com/MontageStark)
- ▶ DogVita CRM: [dogvita-crm.pages.dev/dashboard](https://dogvita-crm.pages.dev/dashboard)
- ▶ St. Thomas Football Fest: [st-football-fest-vasai.pages.dev](https://st-football-fest-vasai.pages.dev)
- ▶ Neuronix: [neuronix-1uy.pages.dev](https://neuronix-1uy.pages.dev)
- ▶ Vogofy: [vogofy.com](https://vogofy.com)
- ▶ Fredun Group: [fredungroup.netlify.app](https://fredungroup.netlify.app)