ADITYA SUGANDHI

FOUNDING, FULL-STACK ENGINEER

JS/TS · React · Node.js · Next.js
Python · PostgreSQL · AWS

5+ YEARS | **4** PRODUCTION SYSTEMS | **10K+** REQUESTS/DAY | **99.9%** UPTIME

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01 BOOKEDFLOW

FOUNDING ENGINEER • BOOKEDFLOW

AI Voice Calling Platform

WHAT IT DOES

A B2B SaaS platform for automated outbound calling using AI voice agents.
Businesses upload contacts, configure AI assistants, and the system calls prospects at scale - qualifying leads 24/7.

THE JOURNEY: DAY 0 → NOW

DAY 0
- Empty folder
- Product idea only
- No roadmap
- No infrastructure

NOW
- Production on AWS EC2
- Campaign Engine - batch calls
- Real-time Dashboard
- VAPI Integration for AI calls
- Contact Management + CSV upload
- Webhook System + recordings

KEY DECISIONS I MADE

STACK
Next.js 14 App Router
PostgreSQL + Raw SQL
TypeScript (strict mode)

ARCHITECTURE
Event-Driven Webhooks
Scheduler Pattern (Cron)
Hybrid Data Strategy

DEPLOYMENT
PM2 Process Manager
AWS EC2 + Supabase
Environment Isolation

HARD PROBLEMS I SOLVED

X Race Conditions
Multiple scheduler runs could double-process
Session-based locking + PostgreSQL advisory

X Anti-Spam Compliance
Can't re-call contacts who already answered
Phone rotation + call history tracking

FULL STACK OWNERSHIP

Schema — API Routes — React UI — Production

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02 DEVICEEXPLORATION

SOFTWARE ENGINEER • FSU

Campus IoT Management Platform

WHAT IT DOES

Real-time monitoring and management platform for 2,500+ IoT devices across campus buildings.
Saves facilities team 15+ hours/week by automating device discovery, battery health tracking, and session analytics.

THE JOURNEY: DAY 0 → NOW

JULY 2025
- 5 terminal scripts
- CSV parsing only
- No database, API, or frontend

JAN 2026
- 2,500+ devices in production
- 100+ API endpoints
- WebSocket real-time data
- Microservices architecture
- 25 database tables (PG + Mongo)
- 80%+ test coverage with CI/CD

KEY DECISIONS I MADE

STACK
FastAPI (async performance)
React + Tailwind CSS
PostgreSQL + MongoDB

ARCHITECTURE
Microservices (3-tier)
WebSocket for real-time
Connection pooling

DEPLOYMENT
Docker multi-stage builds
PM2 process management
Pytest + Jest (80%+ coverage)

HARD PROBLEMS I SOLVED

X Real-time at Scale
2,500+ concurrent WebSocket connections
Connection pooling + heartbeat (<50ms latency)

X Monolith to Microservices
Live migration without downtime
Incremental extraction + API versioning

FULL STACK OWNERSHIP

25 DB Tables — 100+ Endpoints — React Dashboard — 99.9% Uptime

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03 BAS INTERNAL SITE

SOFTWARE DEVELOPER • FSU

Building Automation Dashboard

WHAT IT DOES

Unified dashboard for building automation systems, integrating GitHub deployments, Microsoft auth, BACnet devices, and MongoDB telemetry.
Streamlines facility operations by bringing 4 disparate systems into one interface with single sign-on.

THE JOURNEY: DAY 0 → NOW

DAY 0
- Scattered tools
- 4 separate logins
- Manual processes
- No unified view

NOW
- 141 TypeScript/TSX files
- 4 external integrations
- Single sign-on dashboard
- Feature-based module architecture
- Docker + PM2 deployment
- Comprehensive type safety

KEY DECISIONS I MADE

STACK
Next.js 15 + React 19
TypeScript strict mode
Tailwind CSS

ARCHITECTURE
Feature-based modules
API abstraction layer
Shared type definitions

DEPLOYMENT
Docker containerization
PM2 process management
GitHub Actions CI/CD

HARD PROBLEMS I SOLVED

X 4 External Integrations
GitHub, MS Graph, BACnet, MongoDB Atlas
Unified API layer + retry logic + type-safe wrappers

X Team Scalability
7-person team needs clear ownership
Feature-based architecture + shared types

FULL STACK OWNERSHIP

4 Integrations — API Routes — 141 TSX Files — CI/CD Pipeline

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04 MICROSERVICES MIGRATION

SOFTWARE ANALYST • ASPIRE SYSTEMS

Insurance Platform Modernization

WHAT IT DOES

Enterprise platform transformation for insurance carriers and MGAs. Modernized policy administration,
claims management, and underwriting systems to cloud-native architecture handling 10K+ daily transactions.

KEY RESULTS

99.5% Availability | **10K+** Daily Transactions | **20%** Cost Reduction | **5x** Faster Deploys

TECH STACK

AWS EKS · Kubernetes · OAuth2/JWT · CI/CD Pipelines

THE JOURNEY
Legacy monolithic apps → Cloud-native microservices on AWS EKS → Manual workflows → Automated underwriting pipelines → Siloed data → Real-time claims processing

INSURANCE DOMAIN EXPERTISE

POLICY ADMINISTRATION
- Automated workflows
- Rate calculations
- Document generation
- Endorsement handling

CLAIMS MANAGEMENT
- Real-time processing
- Fraud detection hooks
- Status tracking APIs
- Payment integration

UNDERWRITING
- Risk assessment APIs
- Automated decisioning
- Third-party data
- Compliance rules

CUSTOMER ENGAGEMENT
- Portal integrations
- Notification systems
- Self-service features
- Agent dashboards

EDUCATION
MS Computer Science - Florida State University
BE Computer Engineering - SRM University

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FOCUS AREAS
Full-Stack Development • AI/ML Integration
System Architecture • IoT Platforms
Cloud Infrastructure • Team Leadership