

PitchSnag — AI-Powered Cold Outreach Automation

The Problem

During my job search, freelancing, and startup fundraising efforts, I personally faced the pain of cold outreach: highly manual, research-heavy, and difficult to scale. Existing solutions primarily serve enterprise sales teams, leaving little to no automation options for individuals who require deep personalization but lack resources.

The Solution

I built PitchSnag — an AI-powered end-to-end outreach automation platform for individuals and small teams. It allows users to upload documents and leads, automatically analyzes and enriches data, and generates personalized outreach messages ready for immediate sending with full reply tracking.

System Architecture

Inputs:

- Resume / Pitch Deck (PDF), Lead Lists (CSV / Excel)

Processing Pipeline:

1. **Intent Analysis:** Understands user's outreach objective (job, freelance, fundraising)
2. **Content Analysis:** Extracts skills, experiences, and key data from resumes/pitch decks
3. **Target Analysis:** Evaluates lead relevance and opportunity fit
4. **Research Layer:** Gathers contextual lead data for richer personalization
5. **Profile Builder:** Creates enriched user profiles combining all upstream data
6. **Lead Formatter:** Produces clean, qualified lead lists
7. **Mail Entity Generator:** Produces AI-personalized emails/messages per lead

Technology Stack:

- Frontend: Next.js 15, TypeScript, Tailwind CSS, Radix UI, TipTap, Clerk (auth)
- Backend: tRPC APIs, Prisma ORM (PostgreSQL), Aurinko (OAuth email integration), SMTP
- AI Layer: Google Gemini (primary), OpenRouter models (backup)
- Data Parsing: PDF parsing, CSV/Excel ingestion, lead scoring algorithms
- Messaging: Direct email sending, reply tracking, thread management

Business Perspective

PitchSnag unlocks scalable outreach automation for non-enterprise users — students, freelancers, early-stage founders — a highly underserved but rapidly growing segment. Monetization includes SaaS subscriptions, university/accelerator partnerships, CRM/API integrations, and lead enrichment services.

Key Takeaways

- Solved a problem I personally faced
- Designed and built full-stack, production-grade AI product
- Applied LLMs to real-world SaaS workflows
- Balanced technical, product, and business considerations
- Full system ownership: architecture, engineering, UX, GTM