EduThrift

Problem Statement:

Millions of students across India and even around the world face a severe lack of accessible tools and miss out on critical opportunities like scholarships, internships, and academic resources due to lack of awareness, guidance, or time. Managing student life efficiently is overwhelming. Simultaneously, students face mental health struggles, burnout, and financial hardship, yet existing tools are fragmented. Every year, over INR 830 crores in scholarships go unclaimed due to discoverability issues and lack of guidance. Many students struggle to find part-time jobs, write formal documents, have proper career guidance. With increasing academic pressure and rising education costs, these gaps disproportionately affect students from underprivileged backgrounds who lack mentorship, connections, or tech-savviness. The lack of a unified, personalized support system exacerbates inequality in education and life outcomes. Solving this issue is essential for enabling academic and financial independence among students.

Target Audience & Context:

Our solution is designed for college students aged 17–25 across India, especially from middle- and lower-income backgrounds. Many are first-generation college-goers managing academics, part-time jobs, and financial stress. They are tech-aware but overwhelmed by the scattered ecosystem of apps and websites. EduThrift is positioned as a mobile-first "campus survival app" to support this audience with actionable, relevant, and GenAI-powered tools—from academic help to money-saving hacks.

Use of Generative AI:

Generative AI is the backbone of EduThrift's personalized support. For scholarship and job matching, we use OpenAI's GPT-4 API and semantic similarity via sentence-transformers to rank opportunities by relevance to the student's profile. Listings are summarized using LLM summarization pipelines via LangChain for concise, readable formats. SOPs and LORs are generated through prompt-based templates with few-shot examples, enhanced using ToneTweaker (a fine-tuned GPT-4 API wrapper) for formal, academic, or enthusiastic tone shifts. The mental wellness chatbot is built using LLM chains (LangChain) + sentiment detection (spaCy / HuggingFace) to provide empathetic responses and escalation triggers. Study tools rely on OCR via Tesseract and pdfminer to extract syllabus data, then use RAG (Retrieval-Augmented Generation) via YouTube API to match videos and create curated study plans. Flashcard generation is handled via text2quiz pipelines using Transformers like T5 or LLaMA 2 fine-tuned. These tools enable scale, personalization, and contextual intelligence with minimal manual intervention.

Solution Framework:

EduThrift integrates multiple AI-enabled microservices into a single student-first application. Each feature is structured as a modular service, with shared user profiles for personalization.

1. Scholarship Finder

- Tools: GPT-4 + LangChain + sentence-transformers
- Backend: Firebase/PostgreSQL
- Scrapes verified listings from portals (NSP, Buddy4Study), filters by user profile, ranks by embedding similarity, and summarizes results using LLM.

2. Internship & Job Aggregator

- Tools: GPT-4, FastAPI, Internshala/Upwork APIs
- Matches part-time gigs and internships by skill, duration, pay, and remote status using profile-based search + summarization.

3. SOP & Resume Generator

- Tools: GPT-4 (prompt templates), pdfminer (resume parsing), jsPDF (PDF export)
- Generates editable drafts of SOPs, LORs, resumes based on user input with tone/style controls.

4. Mental Health & Career Chatbot

- Tools: GPT-4, HuggingFace sentiment models, LangChain memory
- Offers emotion-aware support, productivity nudges, and escalation triggers to human help when necessary.

5. On-Campus Marketplace

- Tools: Firebase + React Native
- Allows local item listings with optional AI-generated product descriptions using LLM embeddings.

6. VolunteerConnect

- Tools: jsPDF (certificate generation), Firebase for logs
- Helps students find volunteer gigs, log hours, and download autogenerated certificates for their CVs.

7. Smart Study Planner

- Tools: Tesseract OCR, pdfminer (syllabus parsing), YouTube API, RAG with GPT-4
- Generates personalized video plans, quiz cards, and spaced repetition resources.

Feasibility & Execution:

EduThrift is built for mobile-first access using React + Tailwind (frontend) and a FastAPI backend, hosted via Lovable.app for fast prototyping and scaling. Data is stored via Firebase/PostgreSQL, with integrated GenAI features using OpenAI's GPT-4 and LangChain pipelines. We plan targeted testing on VIT and IIT campuses and will use Razorpay for microtransactions and freemium unlocks.

Scalability & Impact:

EduThrift's modular architecture makes it scalable to any campus. Regional customizations, multilingual support, and scholarship integrations can help expand it across India. With 40M+ college students in India, even 1% adoption gives us 400K users. Our data-informed nudges and gamification ensure high retention. The impact spans financial independence, mental wellbeing, and academic empowerment—essential to shaping a skilled, confident, and self-reliant student generation.

Conclusion & Minimum Lovable Product:

EduThrift is not just a concept—it's already live in beta at eduthrift-student-toolkit.lovable.app. Our GenAI-powered platform is designed to be lovable, usable, and impactful from day one. With its modular design and proven tech stack, EduThrift has clear potential to scale as India's go-to student toolkit—helping learners save, earn, and thrive.