

# College Admissions & Financial Aid Planning App (Maybe) named “Pilas”: Overview

## Project Summary

The College Admissions & Financial Aid Planning App is a comprehensive platform designed to simplify and streamline the complex process of college admissions, degree planning, and financial aid management. This all-in-one solution reduces confusion, enhances decision-making, and provides students and parents with essential tools to navigate higher education effectively.

**Side Note:** The app could be called “*Pilas*” as in:

- “Dylan, ponte las pilas con las matemáticas si quieres aprobar en junio”
  - “Pilas – Get Moving on College”

## Problem & Opportunity

### The Problem

Students and parents face a fragmented and confusing college planning process due to:

- Managing multiple platforms for FAFSA, scholarship applications, and loan options.
- Difficulty tracking degree progress and course requirements.
- Lack of structured college comparisons for financial aid and career outcomes.
- Restricted API access to university and federal systems, preventing real-time data integration.

### The Opportunity

No existing solution seamlessly integrates degree tracking, financial aid navigation, and admissions management. A centralized platform can:

- Automate and simplify financial aid applications (FAFSA, Parent PLUS loans, scholarships).
- Provide AI-driven degree planning and admissions guidance.
- Enable structured college comparisons based on cost, aid, and career potential.
- Implement **document upload functionality**, allowing users to manually submit financial aid documents, degree audits, and transcripts for AI-driven insights and tracking.

## Higher Education Statistics

### 1. Higher Education Market Size

- The global higher education market was valued at approximately **\$736.80 billion** in 2023 and is projected to grow at a **12.1% CAGR from 2024 to 2030**. ([Grand View Research](#))
- The U.S. higher education market size was estimated at **\$557.7 billion** in 2023. ([IBISWorld](#))

## 2. College Enrollment Rates

- In October 2023, **61.4%** of high school graduates aged 16 to 24 were enrolled in college, slightly down from 62.0% in 2022. ([Bureau of Labor Statistics](#))
- **38.6%** of recent high school graduates did not enroll in college immediately after graduation. ([CollegeVine](#))

## 3. Student Loan Debt Crisis

- Total U.S. student loan debt is approximately **\$1.77 trillion** as of 2024. ([Federal Reserve](#))
- The average student loan borrower graduates with around **\$30,000** in debt. ([Education Data Initiative](#))

## 4. College Dropout & Completion Rates

- About **40%** of college students **drop out** before earning a degree. (National Center for Education Statistics)
- The **top reasons for dropping out**: financial struggles, lack of guidance, and academic difficulties.

## 5. Rising Interest in Alternative Education

- Enrollment in **trade schools, online programs, and boot camps** has increased by **30%** since 2020.
- **74% of Gen Z students** say they are open to **alternatives to traditional college**. ([Pew Research](#))

## Key Features & Functionality

### AI-Powered Document Processing & Insights

- Users upload FAFSA, financial aid letters, degree audits, and transcripts.
- AI extracts data and provides structured insights (e.g., required courses for pre-med, available scholarships).
- Logical rule-based recommendations initially, evolving into a machine learning model.

### Degree Audit & Course Planning

- AI processes uploaded degree audit documents to track academic progress.
- AI-powered course sequencing optimizes graduation timelines (e.g., pre-med students take Organic Chemistry and Biology in Year 2).
- Identification of online and in-person course options.

### Admissions & College Application Guidance

- Step-by-step guidance for the Common App and essay writing.
- Scholarship and grant discovery with personalized recommendations.
- Standardized test tracking (SAT, ACT, GRE, GMAT, LSAT, MCAT).

### Financial Aid & FAFSA Automation

- AI extracts and tracks financial aid status from uploaded FAFSA and award letters.
- Loan comparison calculator and repayment estimator.
- Automated reminders for FAFSA and scholarship deadlines.

### **College Decision Dashboard**

- Side-by-side college comparison (tuition, financial aid, graduation rates).
- Career earnings potential analysis based on major and institution.
- AI-driven major selection recommendations based on job market data and earning reports.

### **AI Chatbot for Admissions & Financial Aid**

- 24/7 assistance for FAFSA, admissions, and scheduling questions.
- Auto-fill feature to simplify application processes.

### **Parent Dashboard**

- Tracks financial aid status, applications, and deadlines.
- Provides loan repayment projections based on different borrowing scenarios.

## **Gamification & User Engagement Strategy**

To overcome the perceived inconvenience of manual document uploads and drive user engagement, the platform will implement a gamification strategy:

- **Progress Tracking & Rewards:** Users earn points or badges for completing milestones (e.g., uploading documents, completing a degree audit, applying for scholarships).
- **Leaderboard & Community Engagement:** Users can see how they compare to peers in areas like financial aid optimization and scholarship applications.
- **AI-Powered Challenges:** Weekly or monthly challenges encourage users to complete certain tasks (e.g., "Upload all required financial documents this month and earn a bonus reward").
- **Financial Incentives:** Potential partnerships with scholarship providers or financial aid organizations to provide small rewards or entry into exclusive scholarship pools for engaged users.
- **Customized Insights as a Reward:** The more data a user uploads, the more personalized and actionable insights they receive.

## **Technology Stack & Architecture**

### **Front-End (User Interface & Experience)**

- **Frameworks:** React (Web), React Native (Mobile)
- **UI Components:** Tailwind CSS / Material UI
- **Authentication:** Firebase Authentication / OAuth 2.0

### **Back-End (Data Processing & Logic)**

- **Server:** Node.js with Express.js / Python (FastAPI)
- **Database:** PostgreSQL / Firebase Realtime Database
- **Hosting:** AWS (EC2, Lambda) / Google Cloud / Firebase Hosting
- **Security:** AES-256 encryption, Multi-Factor Authentication (MFA)

## **Data Sources & Integrations**

- **Manual Document Uploads:** AI processes financial aid letters, degree audits, and transcripts.
- **Open-Source Scholarship APIs:** Fastweb, Cappex, Scholly for real-time scholarship updates.
- **IPEDS & NCES:** College and career statistics.
- **Bureau of Labor Statistics (BLS):** Salary projections and industry trends.
- **LinkedIn & Handshake APIs:** Job placement and industry growth trends.

## **Revenue Model**

1. **Freemium Model** – Basic tools for free, premium features (\$5-\$20/month).
2. **University Partnerships** – Schools pay for integration and advising support.
3. **Affiliate Marketing** – Commissions from financial aid resources (student loan providers).
4. **Scholarship Sponsorships** – Companies pay to advertise scholarships.

## **Compliance & Data Security**

- **FERPA (U.S.):** Student records are protected; data sharing requires consent.
- **GLBA (U.S.):** Financial data is encrypted at rest and in transit.
- **GDPR (EU Users):** Explicit opt-in consent and data deletion capabilities.
- **Cybersecurity Measures:** AES-256 encryption, data breach notifications, MFA.

## **Constraints**

- **Limited API Access:** Many university and federal APIs are restricted, requiring manual document uploads instead.
- **Data Privacy Compliance:** Strict adherence to FERPA, GLBA, and GDPR regulations.
- **AI Accuracy & Bias:** Initial rule-based logic must evolve into a fully scalable machine learning model.
- **Scalability:** Ensuring smooth performance and uptime as the user base grows.
- **Financial Constraints:** Initial funding required for MVP development and securing integrations.
- **User Adoption:** Convincing students, parents, and universities to switch from existing solutions.

## Current Needs & Next Steps

Actively seeking a **Technical Co-Founder** to help bring this vision to life. The ideal candidate will have expertise in full-stack development, AI/ML integration, and cloud infrastructure. Key responsibilities include:

- Leading the technical architecture and development process.
- Overseeing front-end and back-end integration.
- Implementing AI-driven document processing and insights.
- Ensuring compliance with security and data privacy regulations.

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