Agentiiv Hackathon Challenge: Adaptive Scholarship Matching + AI Drafting

Format: Teams of 3-5 students

Deliverable:

10 - 15 minute video submission with project pitch deck and app demo
Slide Deck in PDF / PPTX Format
Github Repository Link

Challenge Context

The Problem: Current scholarship tools just match students to opportunities but don't help them apply effectively. Students get generic advice like "write a compelling essay" without understanding what each specific scholarship actually values. A merit scholarship wants different messaging than a community service scholarship.

Current Pain Points:

- Static scoring systems don't adapt to scholarship personality
- Students write one generic essay for all scholarships
- No understanding of what messaging wins each specific scholarship
- Scholarship descriptions contain hidden priorities not captured in application guidance
- Students miss highlighting their strengths that align with scholarship values

The Innovation Challenge: AI Pattern Recognition + Tailored Application Drafting

Prompt: Build an intelligent system that uses LLMs to analyze scholarship patterns, determine what each scholarship values, adaptively score student matches, AND generate tailored application drafts that emphasize the right aspects of a student's profile for each specific scholarship.

Core Technical Innovation:

Your system must:

- Analyze scholarship descriptions to identify hidden priorities
- Determine adaptive weights for different factors per scholarship
- Learn from demonstrated success cases
- Generate tailored application content based on scholarship patterns
- Explain why specific messaging was chosen

Technical Requirements

All approaches must include:

- Pattern Recognition: LLM analysis of scholarship priorities
- Adaptive Scoring: Different scholarships get different weight profiles
- Content Generation: AI-powered application drafting
- Explainable AI: Show why specific messaging was chosen
- Comparative Demo: Show improvement over generic applications
- Real Data: Use actual scholarship descriptions and winner stories

Deck Requirements

- Introduce your approach to solving the problem
- Explain the methodologies you tried
- Showcase how your approach differs from the State of the Art
- Discuss any advantages and disadvantages of your approach
- Future Improvements and Next Steps

Success Criteria

Innovation & AI Integration (35%):

- Creative use of LLMs for pattern recognition and content generation
- Quality of adaptive weighting and drafting algorithms
- Sophistication of scholarship analysis and messaging optimization
- Novel insights discovered through AI analysis

Drafting Quality & Relevance (35%):

- Quality and relevance of generated application content
- Effectiveness of scholarship-specific messaging adaptation
- Demonstration of improved application targeting

- User-friendly interface for draft generation and editing

Technical Execution (30%):

- Effective LLM prompt engineering and API integration
- Robust content generation and optimization algorithms
- Handling of edge cases and content quality issues
- Performance and scalability considerations

Resources to gather:

- 25+ scholarship descriptions with detailed criteria
- Anthropic API keys for LLM integration ,
- Sample student profiles with varied backgrounds and stories
- Public scholarship winner stories and application examples
- Basic web framework with LLM integration examples
- Essay prompt templates and application examples

Innovation Focus Areas

Key Research Questions to Explore:

- How can AI identify the messaging that resonates with specific scholarships?
- What patterns exist in successful applications that can inform drafting?
- How can the same student story be optimally reframed for different scholarships?
- Can AI generate compelling, authentic-sounding application content?
- How do you balance AI assistance with student authenticity?

What We Want to See:

- Innovative approaches to scholarship-specific content generation
- Smart reframing of student stories for different audiences
- Clear demonstrations of improved application targeting
- Creative solutions for maintaining authenticity while optimizing messaging
- Scalable drafting solutions that work across scholarship types

Example Approaches

LLM Pattern Analyzer + Adaptive Weights + Smart Drafting

Build: System that analyzes scholarships, determines weights, AND generates tailored essays

- Feed scholarship description into LLM to extract priority patterns
- Generate adaptive weight profiles (e.g., "Merit-focused: GPA=40%, Leadership=20%")
- Use weight insights to generate tailored essay drafts that emphasize valued qualities
- Same student gets different essay angles for different scholarship types
- Demo: "For merit scholarship, emphasize academic achievements. For community scholarship, lead with service impact."

Success Case Pattern Mining + Application Guidance Build: System that learns from winners and generates application strategies

- Analyze public scholarship winner stories to extract success patterns
- Identify messaging themes: "Engineering scholarships highlight hands-on projects, not just grades"
- Generate application drafts that mirror successful winner narratives
- Provide specific guidance: "Based on past winners, emphasize your maker projects over GPA"
- Demo showing application drafts based on winner pattern analysis

Scholarship Personality Profiler + Targeted Messaging

Build: AI that creates scholarship "personalities" and matches student messaging

- Use LLMs to analyze scholarship language and create personality profiles
- Generate personality-matched application content
- Example: "Innovation-focused scholarship" → draft emphasizes creativity, risk-taking, problem-solving
- Explain matches: "This scholarship values creative problem-solving - your robotics story leads"
- Demo showing how same student story gets reframed for different scholarship personalities

Dynamic Essay Optimizer

Build: System that takes student's base story and optimizes it for each scholarship

- Student provides their core experiences and achievements
- AI analyzes target scholarship to determine optimal framing
- Generates multiple versions emphasizing different aspects
- Example: Robotics project → "leadership angle" for leadership scholarship, "technical innovation angle" for STEM scholarship
- Demo showing one story becoming multiple targeted applications

Expected Outcome

A working AI-powered system that not only matches students to scholarships but helps them craft compelling, targeted applications by understanding what each scholarship actually values and generating tailored content that highlights the student's most relevant strengths.