V4 Gauntlet AI Program Design

Overview

This table outlines Gauntlet AI, an intensive 12-week AI engineering crucible that transforms ambitious developers into elite AI engineers through a series of increasingly challenging projects.

Project Breakdown

Each project represents a gauntlet of its own:

Part 1: The Speed Build

1. Students race to rebuild a complex, production-grade application using modern AI tools
2. Learn to architect and build systems 10x faster while maintaining quality code
3. Create robust, scalable foundations ready for AI enhancements

Part 2: The AI Evolution

1. Transform the basic app by integrating cutting-edge AI features
2. Combine multiple AI services to create genuinely valuable capabilities
3. Focus on making AI features intuitive and essential to users

Success isn't just measured in code – but in user adoption, technical excellence, and community impact.

The stakes are real:

1. Each project is judged on both technical merit and real-world impact
2. Every graduate receives the ultimate prize: a guaranteed $200k/year position at a leading AI company
3. Projects are publicly visible, building each student's professional portfolio and industry reputation
4. The pressure of time constraints and competition forges classroom knowledge into practical expertise

This is not a traditional curriculum – it's a proving ground for the next generation of AI engineers who can both build robust systems and enhance them with transformative AI capabilities. Each row in this table represents a comprehensive challenge that tests students' ability to execute under pressure, innovate with AI, and deliver measurable impact.

Legend

Stage & Weeks: The curriculum is organized into three stages, with each stage spanning 4 weeks. The first two stages consist of individual projects, while the final stage is dedicated to team-based capstone work.

Project: The mission and stakes of each project - what students are trying to achieve, who it impacts, and why it matters. This sets the context and motivation for both the rebuild and AI enhancements.

Deliverables: Required project milestones and outputs that demonstrate mastery of both development and AI capabilities.

Key AI Skills: Core AI engineering competencies that students will develop through implementing the enhancements. These skills build progressively throughout the curriculum.

Target App: The established application that students will use as a foundation for their rebuild. Students recreate core functionalities of these popular apps to demonstrate fundamental engineering capabilities.

Rebuild Success Criteria: Specific, measurable requirements that students must meet to demonstrate they have successfully rebuilt the core functionality of the target app. These criteria ensure technical competency and feature completeness.

AI Enhancements: Novel AI features that students will integrate into their rebuilt application, extending beyond the target app's original functionality.

Success Metrics: A combination of: Technical metrics: How well the AI performs its intended function (accuracy, speed, reliability), user adoption metrics: Active users,

engagement rates, viral coefficients, and developer community impact: GitHub stars, forks, community contributions

Summary Table

Stage	Weeks	Project Description	Deliverables	Key AI Skills	Similar App	Rebuild Success Criteria	Potential AI Enhancements	Success Metrics
1	1	Transform workplace communication by giving every user a professional digital twin that can participate in meetings, respond to messages, and maintain their authentic voice and personality - enabling asynchronous communication without losing the human element.	• Link To BrainLift File • URL for App They Built • GitHub/Code Link • Tweet with Accountability Video • Tag Experts in BrainLift Topic	1. Foundation Model Mastery a. Speech synthesis and facial animation models b. Model selection and evaluation c. Real-time model performance optimization 2. Prompt Engineering a. Personality matching and maintenance b. Conversation style consistency c. Context awareness in dialogues 3. AI-First Development a. Real-time communication features b. WebSocket integration with AI c. Stateful conversation management 4. BrainLift Skills a. Build knowledge base of communication patterns across remote teams b. Identify innovative approaches to presence and authenticity in communication	Slack	1. Real-time messaging 2. Channel/DM organization 3. File sharing & search 4. User presence & status 5. Thread support 6. Emoji reactions	1. AI avatar that represents users in conversations and meetings using D-ID/HeyGen integration 2. Voice synthesis matching user and visual rendering 3. Gesture/expression generation 4. Context-aware responses 5. Personality mirroring	• Avatar response latency <2s • 90% or higher accurate gesture or expression matching to actual message tone
1	2	Transform static document storage into an intelligent knowledge engine that not only organizes information but actively synthesizes and creates new insights from your existing content - turning passive file storage into an active collaborative brain for your organization.	• Link To BrainLift File • URL for App They Built • GitHub/Code Link • Tweet with Accountability Video • Tag Experts in BrainLift Topic	1. RAG a. Document processing and chunking b. Semantic search implementation c. Vector database optimization 2. Context Hacking a. Knowledge synthesis across documents b. Context window optimization c. Information distillation 3. QA in Production AI Apps a. Content generation pipelines	Google Drive	1. File/folder structure management 2. Document creation & editing 3. Real-time collaboration features 4. Version history 5. Share permissions system 6. Comment & suggestion tracking 7. Search functionality 8. Sync files with your Google Drive, Dropbox, iCloud, etc.	1. Semantic search across all documents 2. Auto-categorization & tagging 3. Smart folder suggestions 4. Content synthesis across docs 5. Automatic blog/newsletter generation 6. Executive summary creation 7. Related content discovery 8. Knowledge graph visualization	• Search relevancy score >85% • Content synthesis coherence rating >4.5/5 • 50% increase in content reuse

				b. Batch processing systems c. Quality assurance for complex AI systems 4. BrainLift Skills a. Create knowledge graphs showing how to organize and synthesize internal documentation				
1	3-4	Revolutionize nutrition tracking by eliminating manual food logging - making healthy eating effortless through instant visual recognition and detailed nutritional analysis that helps users understand and improve their diet with minimal friction.	• Link To BrainLift File • URL for App They Built • GitHub/Code Link • Tweet with Accountability Video • Tag Experts in BrainLift Topic	1. Foundation Model Mastery a. Computer vision models b. Multi-modal model integration c. Real-time inference optimization 2. (AI)PI Integration a. Nutrition databases b. Image processing services c. Data aggregation systems 3. AI-First Development a. Mobile-first AI features b. Camera integration c. Real-time feedback systems 4. BrainLift Skills a. Build index of visual food recognition approaches and their accuracy rates b. Map relationships between user behavior patterns and successful health tracking apps	MyFitnessPal	1. Food database & search 2. Macro/micronutrient tracking 3. Daily goal setting 4. Meal logging interface 5. Progress tracking 6. Basic analytics/trends 7. User profile management 8. Social features/sharing	1. Multi-item meal photo analysis 2. Portion size estimation 3. Ingredient decomposition 4. Nutritional value calculation 5. Alternative suggestion engine 6. Historical eating pattern analysis 7. Recipe reconstruction	• 95% food item recognition accuracy • Nutrient calculation accuracy >90% • Recognition time <2 seconds
2	5	Democratize professional investment strategies by creating an AI financial advisor that provides personalized portfolio management, bringing institutional-grade trading intelligence to everyday investors while maintaining responsible investment practices.	• Link To BrainLift File • URL for App They Built • GitHub/Code Link • Tweet with Accountability Video • Tag Experts in BrainLift Topic	1. RAG a. Financial data processing b. Real-time information retrieval c. Market context integration 2. (AI)PI Integration a. Market data APIs b. Trading systems c. Real-time data streams 3. Production AI Apps a. Real-time AI analysis b. Risk management systems c. Automated trading logic 4. BrainLift Skills a. Investigate retail trading platforms and their AI integration approaches b. Identify novel patterns in how AI	Robinhood	1. Real-time trading interface 2. Portfolio tracking 3. Market data visualization 4. Order execution system 5. Watchlist management 6. Basic charting tools 7. Account management 8. Banking integration using Plaid	1. Personal AI financial advisor 2. Portfolio optimization engine 3. Risk assessment modeling 4. Market sentiment analysis 5. Automated trade suggestions 6. Custom strategy backtesting 7. Pattern recognition alerts	• Market pattern recognition accuracy rate >80% • Real-time analysis latency <500ms