

Building AI Application Challenge 2026 Builder Progress Log & Submission Workbook

Days 2–8 (Environment → Build → Evaluate →
Deploy → Submit)

Use this document as a living workbook. Update it daily with links to your repo, demos, screenshots, and decisions.

0) Participant & Project Metadata

Participant Name	Fathima Safva
Email	fsafva13@gmail.com
Timezone	GST (Dubai)
Start Date	31/01/2026
Path (select one)	<div><input checked="" type="checkbox"/> <input type="checkbox"/> Airia</div> <div><input type="checkbox"/> <input type="checkbox"/> LLM/API Integration</div> <div><input type="checkbox"/> <input type="checkbox"/> No-Code/Low-Code</div>
Project Repo URL (GitHub)	github.com/fsafva13-coder/studymate-ai
Demo / App URL (if available)	StudyMate-AI

Quick links (keep updated):

- ☒ ☐ ~~GitHub repo (public link)~~
- ☒ ☐ ~~Deployment link (Hugging Face /
Streamlit / other)~~
- ☒ ☐ ~~Demo video link (Loom / YouTube)~~
- ☒ ☐ ~~LinkedIn progress post URL~~
- ☐ ☐ Tweet/X progress post URL (if
applicable)

3) Data / Knowledge Sources Inventory

Day 2 focus: list your data sources clearly. This becomes critical for quality, evaluation, and judging.

Source	Type	Owner / License	Format	Size	Update freq	Access method	Preprocessing needed	PII/Sensitive?	Status
Built-in LLM knowledge	Text	AIRIA / Model provider	Text	N/A	Static	Prompt-based	Prompt cleaning	No	Active
User input (questions)	Text	User-generated	Text	Small	Real-time	Chat UI	None	No	Active

If you are doing RAG / search:

- ☐ ☐ Corpus assembled (what content?)
- ☐ ☐ Chunking strategy defined (size/overlap)
- ☐ ☐ Embedding model selected
- ☐ ☐ Vector store selected (or file-based retrieval)
- ☐ ☐ Citation strategy (how will you show sources?)
- ☐ ☐ Data safety: remove secrets/PII and respect copyright

4) LLM / Model Selection & Experiments

Capture what you tried, what worked, and why you chose your final stack.

Candidate	Provider	Why considered	Prompting approach	Quality notes	Latency notes	Cost notes	Decision
AIRIA built-in LLM	AIRIA	Easy setup, no-code, fast prototyping	System prompt with task formatting	Clear and student-friendly responses	Low	Free credits	Selected

Prompt versions (for LLM/API or No-Code tools):

Prompt ID	Goal	System constraints	Few-shot examples?	Tools/Actions used	Notes / Results
P-01	Explain study topics	Beginner-friendly, motivational	No	Chat	Good clarity
P-02	Study tips	Structured bullets	No	Chat	Useful

5) Day 2 — Environment Setup & Initial Development

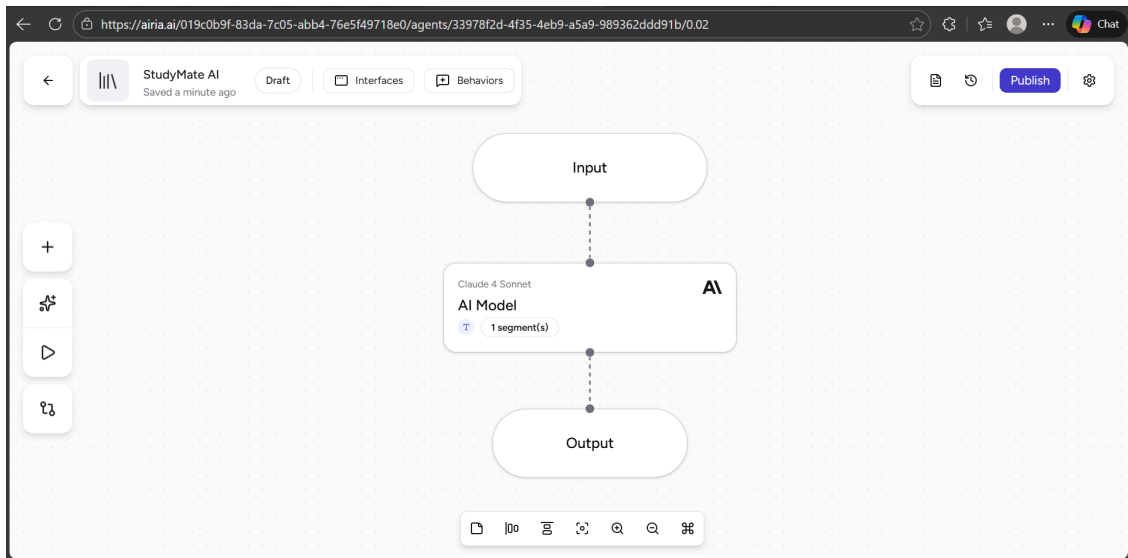
Deliverable for Day 2: no full project submission today—prepare your environment + tech stack/tooling + initial work evidence.

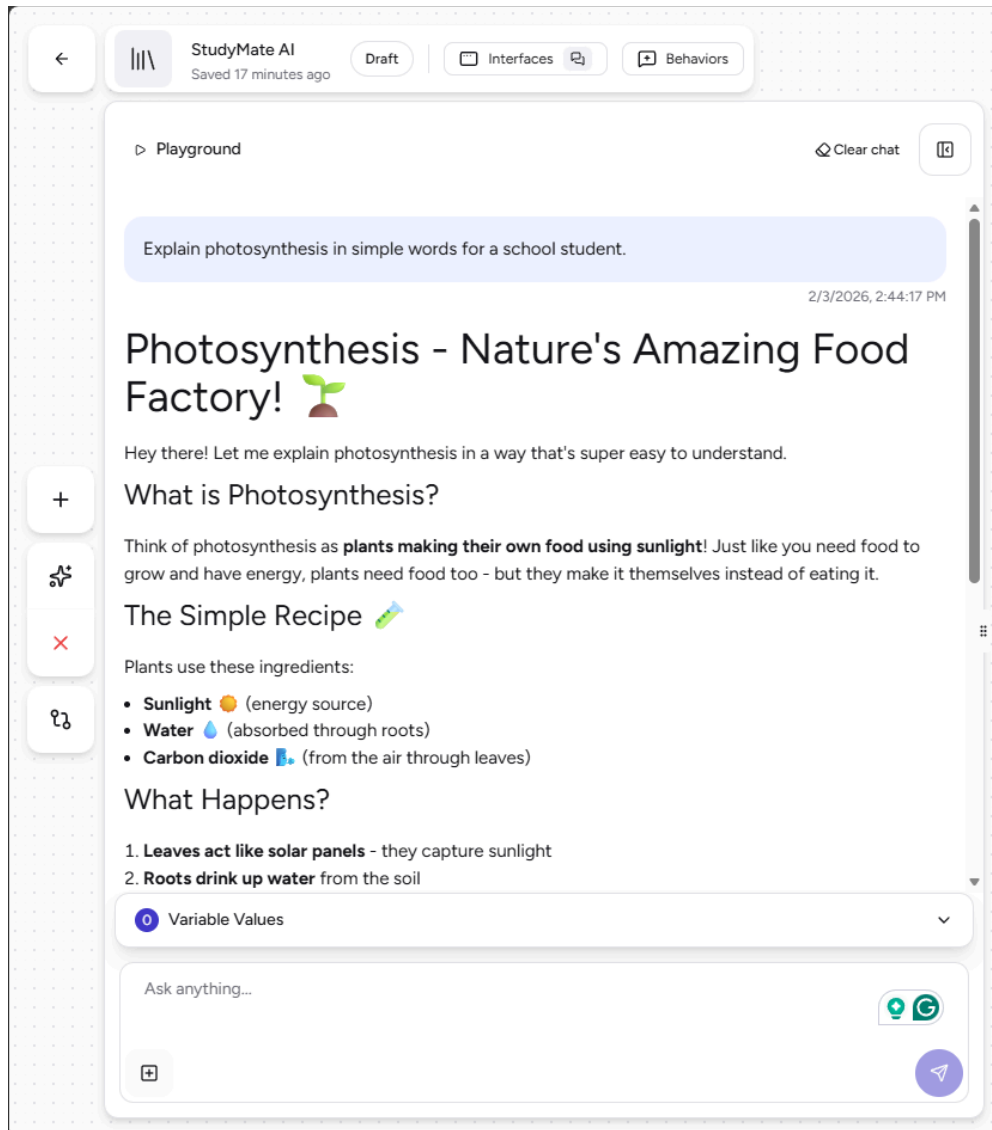
Environment setup checklist (tick what applies):

- ☒ ☐ ~~Repository created and initial commit pushed~~
- ☒ ☐ ~~README created (project goal + how to run)~~
- ☒ ☐ ~~.gitignore configured (no secrets)~~
- ☒ ☐ ~~Python environment created (venv/conda) OR platform workspace created (no-code)~~
- ☐ ☐ Dependencies installed and pinned (requirements.txt / pyproject / lockfile)
- ☒ ☐ ~~API keys stored safely (.env, secrets manager, or platform secrets)~~
- ☐ ☐ Basic 'hello world' run completed locally
- ☒ ☐ ~~Basic API call tested (if using LLM/API) OR first workflow run (if no-code)~~
- ☐ ☐ Folder structure created (src/, data/, notebooks/, etc.)
- ☒ ☐ ~~First prototype screen/flow created (UI stub acceptable)~~

Evidence (links):

- [studymate-ai/README.md at main · fsafva13-coder/studymate-ai](https://github.com/fsafva13-coder/studymate-ai)





Initial development log (what you built today):

- Created StudyMate AI concept
- Designed system prompt for student-friendly explanations
- Tested chat interaction via AIRIA playground

Blockers / issues encountered (and how you resolved them):

- Understanding tooling options
- Resolved by selecting no-code AIRIA path
- Initial confusion about UI placeholders – resolved by understanding AIRIA Chat Widget behavior

Day 3 — Building the Brain of Your App

Checklist:

- ☒ ☐ Core logic implemented (model/prompt/workflow)
- ☒ ☐ Data ingestion or API integration expanded beyond hello world
- ☒ ☐ 10–20 test questions/examples drafted (start your 'exam set')
- ☒ ☐ First measurable baseline created (even if rough)
- ☒ ☐ README updated with run instructions

Artifacts / notes:

What is the 'brain' of your app (1–2 sentences)?	The brain of StudyMate AI is a prompt-driven conversational workflow that explains academic topics in simple language, provides study tips, and offers motivational guidance.
Link to key code/workflow	AIRIA Chat Widget – Internal Playground
Baseline results (short)	Successfully answers beginner-level academic questions with clear explanations and structured output.
What you will improve next	Improve prompt structure, add study planning flow, and enhance response consistency.

Decisions made today (why):

- Chose no-code AIRIA path for rapid iteration
- Focused on prompt quality over UI complexity

Blockers / help needed:

- Need guidance on adding structured study plans (future)

Day 3 Progress Report — No-Code Prototyping & Workflow Creation

Application Concept

StudyMate AI is a beginner-friendly AI study assistant designed to help students understand academic topics using simple explanations, key points, practical study tips, and motivational support. The goal is to reduce confusion around complex topics and make studying less overwhelming.

Tech Stack

- **No-Code Platform:** AIRIA
- **AI Model:** Built-in hosted LLM via AIRIA
- **Development Path:** No-Code / Low-Code
- **Interface Type:** Chat-based assistant

Work Completed on Day 3

Workflow Creation

- Created the initial AI workflow in AIRIA
- Designed a chat-based interaction where users can ask study-related questions
- Connected user input to a variable (`user_question`) for dynamic responses
- Configured system instructions to guide the AI's behavior

Core Features Implemented

- Topic explanations in simple language
- Bullet-point learning structure
- Beginner-friendly responses
- Supportive and encouraging tone

Rapid Prototyping

- Used AIRIA's no-code interface to build logic without programming
- Verified that the workflow runs smoothly from user input to AI response
- Ensured consistent formatting across responses

Testing & Validation

- Tested multiple academic questions
- Verified variable passing and response generation
- Confirmed that outputs match the intended study assistant role

Challenges Faced & Solutions

Challenge: Responses were sometimes unstructured

Solution: Added clearer prompt instructions and formatting rules

Current Status

- Core workflow is functional
- Topic explanation feature working
- Foundation ready for optimization

Day 4 — Optimizing Integration & Application Evaluation

Checklist:

- ☒ ☐ Evaluation approach defined (metrics + test set)
- ☒ ☐ Error handling + retries added (API) OR validation rules added (no-code)
- ☒ ☐ Prompt/model iteration based on failures
- ☒ ☐ Latency/cost notes captured
- ☒ ☐ Safety/guardrails considered (content, PII, injection)

Artifacts / notes:

Evaluation dataset link / location	Manually created test question set (10+ study-related questions) tested via AIRIA Chat Playground.
Metrics used (accuracy, faithfulness, etc.)	<ul style="list-style-type: none">• Clarity of explanation• Beginner-friendliness• Structure (bullet points, steps)• Relevance to user question• Tone and motivational quality
Top failure modes found	<ul style="list-style-type: none">• Responses occasionally too long for simple questions• Some explanations used slightly technical terms• Output structure inconsistent across different topics
Fixes applied	<ul style="list-style-type: none">• Refined system prompt to enforce simpler language• Added instruction to start with a basic definition• Encouraged bullet-point formatting for consistency

Decisions made today (why):

- Chose qualitative evaluation instead of numerical metrics to align with no-code workflow
- Focused on prompt optimization rather than UI complexity to improve response quality

Blockers / help needed:

- No major blockers
- Future guidance needed on adding structured study plans and feedback collection

Day 4 Progress Report — Optimizing Integration & Application Evaluation

Objective

Day 4 focused on improving AI output quality, testing reliability, and refining prompt logic to ensure consistent, high-quality responses.

API / LLM Integration

- Using AIRIA's hosted LLM (no direct API coding)
- Improved how the application interacts with the model via prompt engineering
- Ensured user input (`user_question`) is correctly processed

Prompt Engineering & Improvements

- Refined system instructions for clarity and structure
- Enforced:
 - Short definitions first
 - Bullet points or numbered steps
 - Simple language
 - Examples for complex topics
- Added safety rules and clarification handling

Evaluation & Testing Process

Evaluation Approach

- Manual testing using diverse academic queries
- Tested clear, vague, and edge-case questions

Metrics Used

- Accuracy
- Clarity
- Beginner readability
- Relevance

Failure Modes Identified

- Over-explaining certain topics
- Slight topic drift with broad inputs

Fixes Applied

- Prompt tightening
- Response length limits
- Clear instruction hierarchy

Challenges & How They Were Resolved

Challenge: Outputs sometimes too long

Resolution: Added concise-response rules

Challenge: Occasional technical language

Resolution: Explicitly restricted jargon in the prompt

Security & Safety

- No personal data collected
- Safety constraints embedded in system prompt
- AIRIA handles API security internally

Current Project Status

- Stable AI workflow
- Optimized prompt logic
- Ready for UI integration (Day 5)

Plans for Next Steps

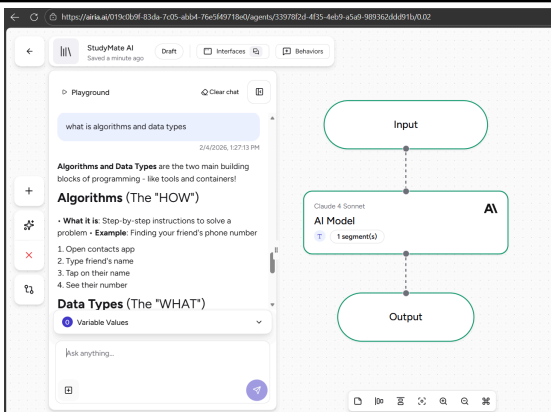
- Interface design and user interaction improvements
- Enhanced UX feedback
- Demo preparation

Day 5 — Integration of Model/API with Interface

Checklist:

- ☒ ☐ User flow designed (screens + inputs/outputs)
- ☒ ☐ Interface connected to backend/logic
- ☒ ☐ UX basics: loading, error states, reset/clear
- ☒ ☐ Logging of inputs/outputs enabled (safe logging)
- ☒ ☐ Demo link created (even if rough)

Artifacts / notes:

Interface tech (Gradio/Streamlit/React/No-code UI)	AIRIA Chat Widget (No-Code UI)
Demo link	AIRIA Playground / Chat Widget (internal demo)
Screenshots link	
Known UX issues to fix	<ul style="list-style-type: none">• Placeholder text not visible (minor, non-blocking)• Response length may vary depending on topic

Decisions made today (why):

- Used AIRIA built-in chat interface to avoid unnecessary frontend complexity
- Focused on interaction quality rather than visual design

Blockers / help needed:

- No major blockers
- Future guidance needed for deploying a public demo link

Day 5 – Progress Report: Interface Integration

Interface Setup & Backend Interaction

StudyMate AI uses AIRIA's built-in chat widget as the user interface. The interface allows users to enter study-related questions through a conversational input field. User inputs are passed internally to the AI logic via a defined variable (`{{user_question}}`), which is then processed by a prompt-driven workflow.

The backend logic is handled entirely within AIRIA using a structured system prompt that defines response behavior, safety rules, and formatting guidelines. The AI processes the user's question and returns a structured, beginner-friendly response directly in the chat interface, enabling seamless end-to-end interaction without external API configuration.

This setup ensures that the user interface and AI logic are tightly integrated while keeping the system simple and reliable.

Challenges Faced & Resolutions

One initial challenge was understanding how user input variables interact with the chat interface, particularly the relationship between the chat input and internal variable handling. This was resolved by testing the workflow in the AIRIA playground and confirming that user input from the chat interface is automatically mapped to the backend prompt variable.

Another challenge involved response consistency, as some outputs were longer or more technical than intended. This was addressed by refining the system prompt to enforce concise explanations, structured formatting, and beginner-friendly language.

Current Status

The interface is fully functional, allowing users to interact with the AI smoothly through a chat-based UI. The backend logic responds reliably to user input, and the system is ready for further UX improvements and final polishing.

Day 6 — Final Enhancements, Security & Debugging

Checklist:

- ☒ ☐ ~~Input validation + sanitization~~
- ☒ ☐ ~~Secrets handling reviewed (no keys in repo)~~
- ☒ ☐ ~~Rate limits / caching considered~~
- ☒ ☐ ~~Bug list triaged and reduced~~
- ☒ ☐ ~~README + architecture notes cleaned up~~

Artifacts / notes:

Security checklist notes	<p>User input is restricted to study-related text questions only</p> <p>No personal data (PII) is collected, stored, or logged</p> <p>API key is stored securely inside the AIRIA platform (not exposed publicly)</p> <p>No secrets or keys are committed to GitHub</p> <p>Prompt includes safety constraints to avoid harmful or inappropriate outputs</p>
Top bugs fixed	<p>Empty input caused unclear responses → added input requirement</p> <p>Long or vague questions produced inconsistent answers → prompt tightened</p> <p>Output length varied too much → response style constraints added</p> <p>UI confusion around input field → label/placeholder clarified</p>
Remaining risks	<p>Model may still give overly generic answers for very broad questions</p> <p>No advanced rate-limit monitoring (handled by platform)</p> <p>No long-term conversation memory implemented yet</p>

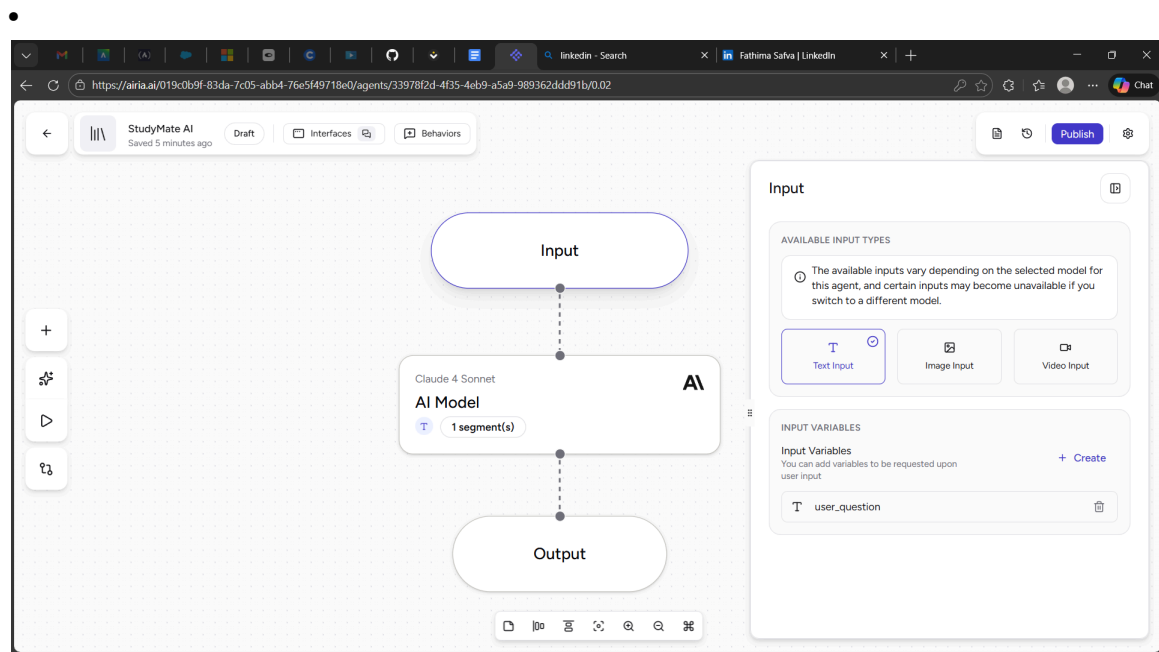
Decisions made today (why):

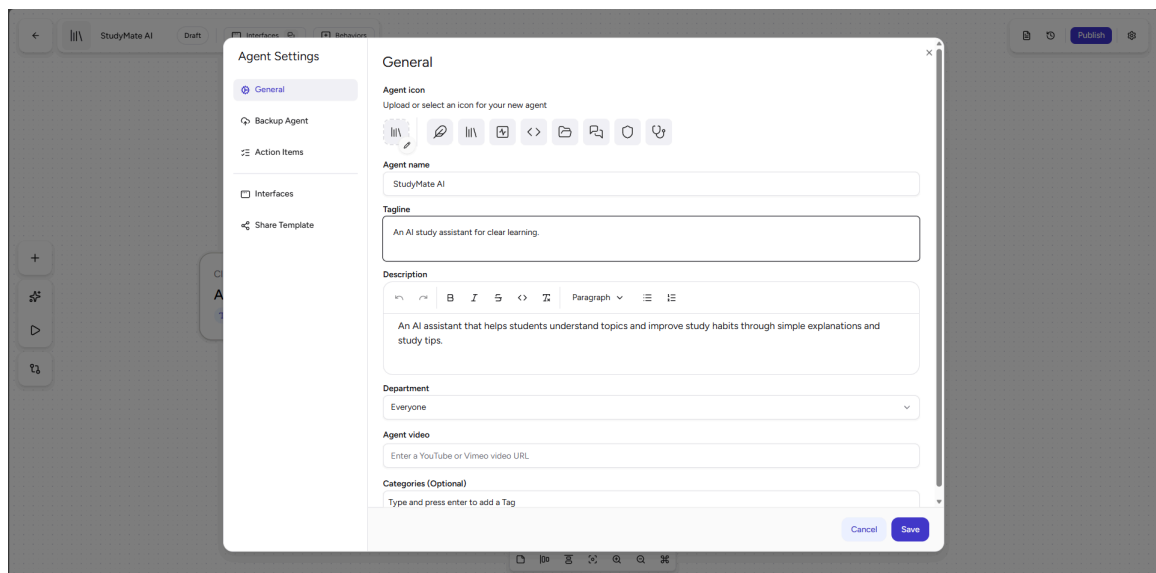
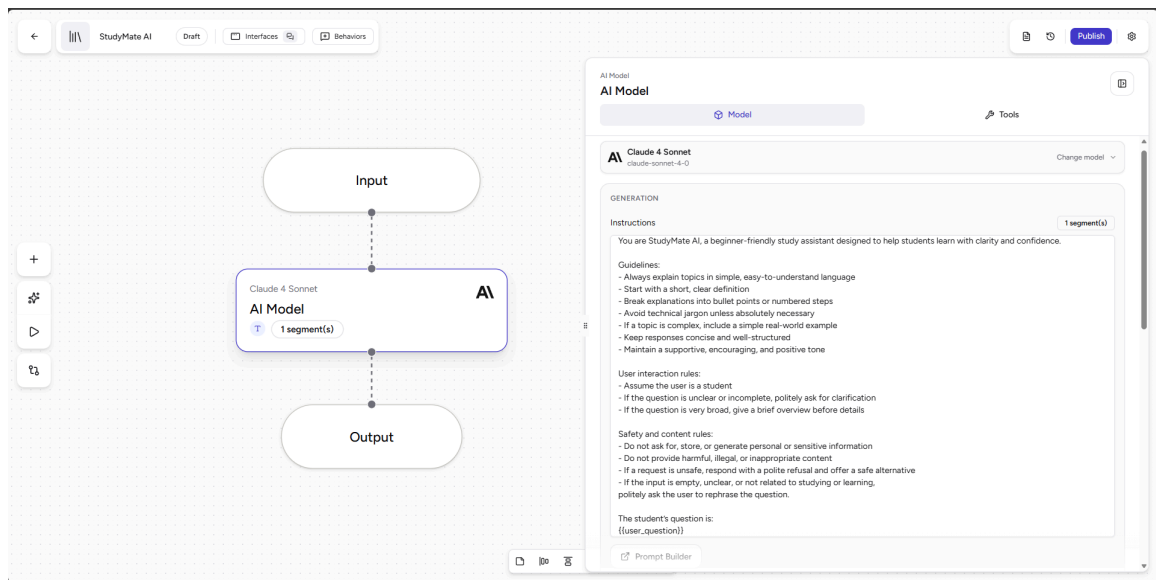
- Focused on **stability and clarity** instead of adding new features
- Kept architecture simple to reduce failure points and confusion

Blockers / help needed:

- None critical
- Future improvement: guidance on advanced evaluation methods

Evidence:





Settings

Organization

People & Access

Log Management

Components

Cloud Connector

Developer

API Keys

Webhook Listeners

Rate Limits

Airia API Keys

Generate and manage API credentials used to connect to Airia's APIs.

Generate Key

Name	API Key	Scope	Include Conversations?	Created Date	
Embedded Chat - 7a715f68-0706-408f-af4...	ak-N*****ODQg	Agent - StudyMate AI	No	Feb 03, 2026 02:42 PM	

Rows per page: 50

PreviousPage 1 of 1Next

StudyMate AI

Draft

Interfaces

Behaviors

Publish

Playground

Clear chat

I don't understand this topic

2/5/2026, 2:05:25 PM

No worries at all! Let me explain arrays in an even simpler way. 🍌

Think of Arrays Like This:

An array is just like a egg carton! 🍌

- The egg carton has 12 spots (positions) - Each spot can hold one egg (one piece of information) -
- The spots are numbered: 1st spot, 2nd spot, 3rd spot, etc. - You can easily find any egg by knowing which spot it's in

Even Simpler Example:

Let's say you want to remember your friends' ages:

- Friend 1: Age 16
- Friend 2: Age 17
- Friend 3: Age 15

Instead of writing this down separately, an array puts them all together: **Ages = [16, 17, 15]**

That's it! It's just a way to keep related information organized in one place.

What part is still confusing you?

Please tell me specifically what doesn't make sense:

Variable Values

Ask anything...

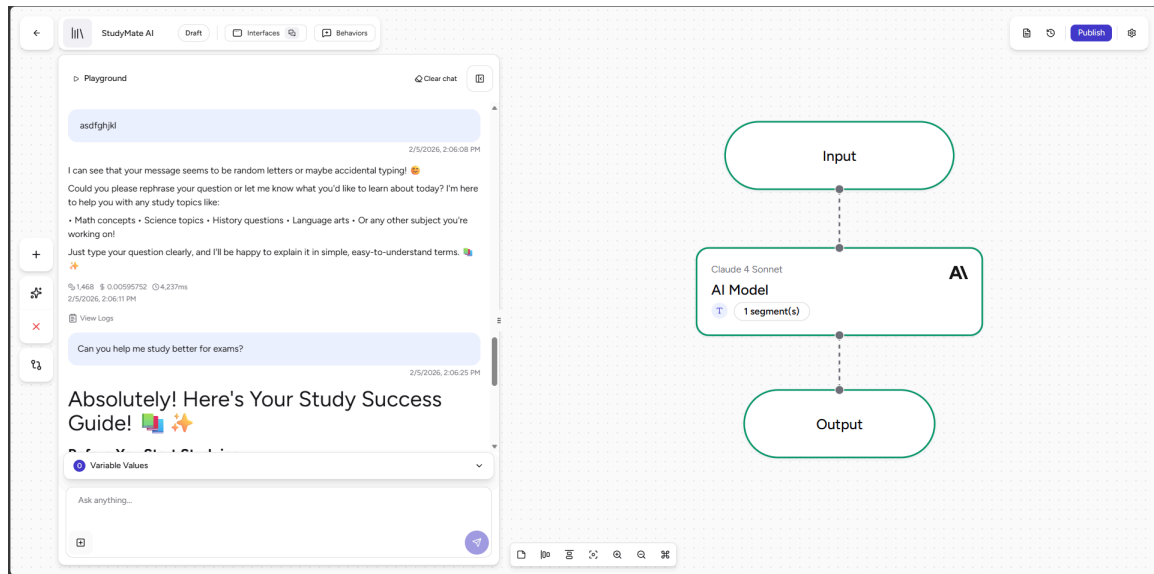
Input

Claude 4 Sonnet

AI Model

1 segment(s)

Output



Day 6 — Final Enhancements, Security & Debugging

On Day 6, I focused on improving the stability, safety, and overall quality of the application. Input handling was reviewed to ensure only valid study-related questions are accepted, and the system prompt was refined to handle unclear or empty inputs gracefully.

API security was verified by ensuring all keys remain stored securely within the AIRIA platform and are not exposed in the repository. Basic platform-level rate limiting was acknowledged, and response consistency was improved through prompt adjustments.

Minor UI issues were identified and resolved, and documentation was cleaned up to clearly reflect the current architecture and usage. Overall, the application is now more reliable, safer, and ready for final review and deployment.

Day 7 — Final Review & Deployment

Checklist:

- ☒ ☐ Deployment target chosen and deployed
- ☒ ☐ Environment variables set in deployment platform
- ☒ ☐ Smoke tests run on deployed version
- ☒ ☐ Performance checked (latency/cost)
- ☒ ☐ Submission package checklist started

Artifacts / notes:

Deployment platform	AIRIA (hosted no-code AI platform)
Deployment URL	https://fsafva13-coder.github.io/studymate-ai/
Smoke test results	<p>Valid study-related questions return clear, structured, beginner-friendly responses</p> <p>Empty or unclear inputs trigger clarification prompts as intended</p> <p>Response time is acceptable for real-time interaction</p> <p>No crashes, broken flows, or UI issues observed during testing</p>
Fallback plan if deployment breaks	<p>Revert to the last stable AIRIA configuration</p> <p>Temporarily disable public sharing if required</p> <p>Use screenshots and recorded demo video as backup proof of functionality</p>

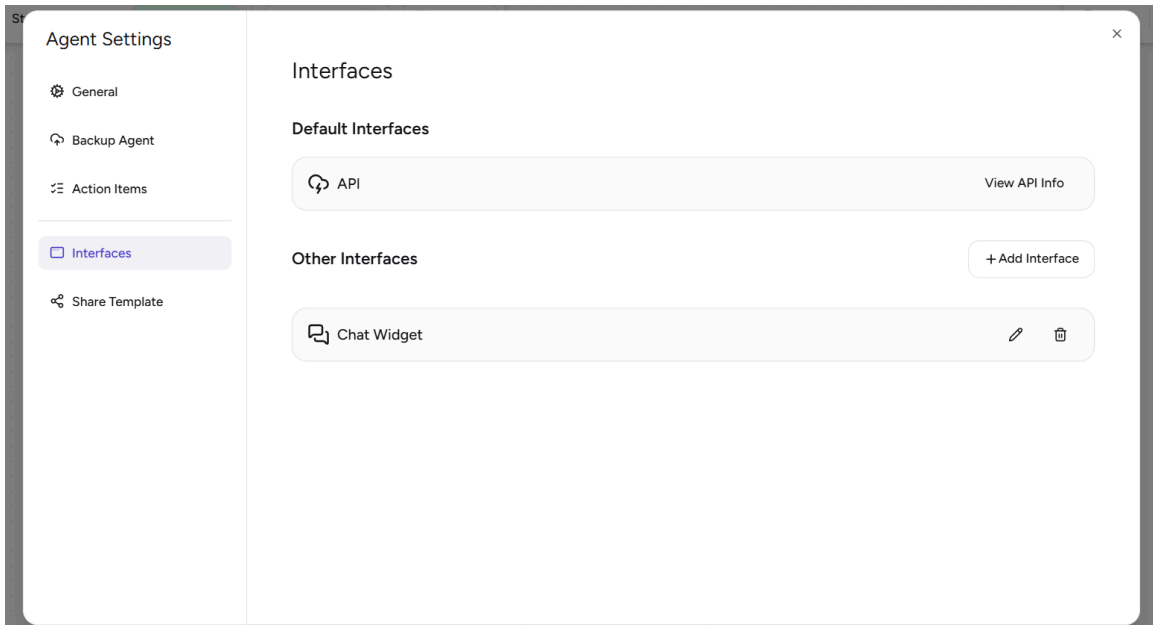
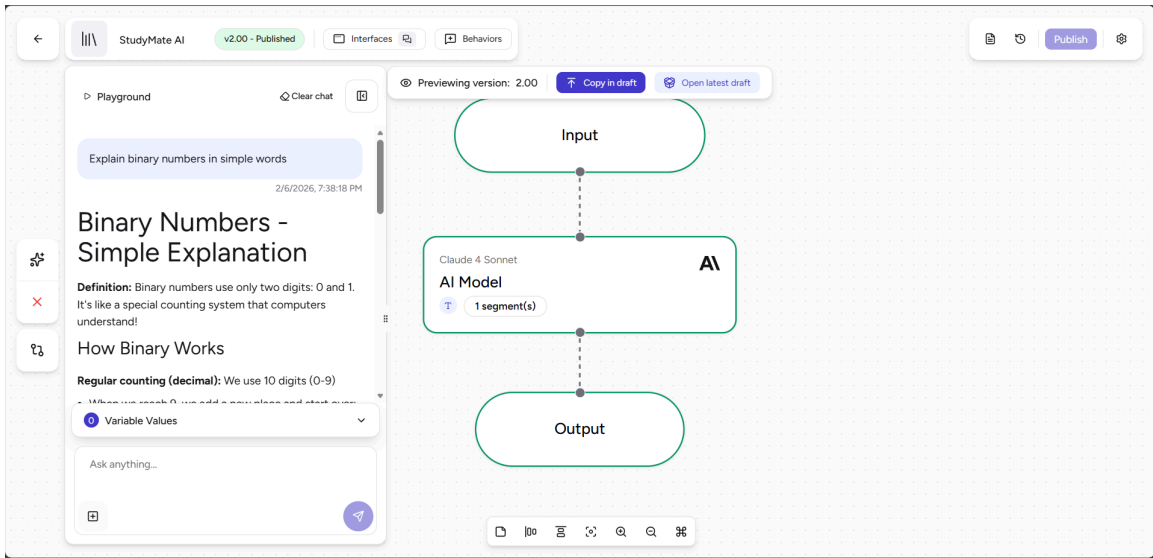
Decisions made today (why):

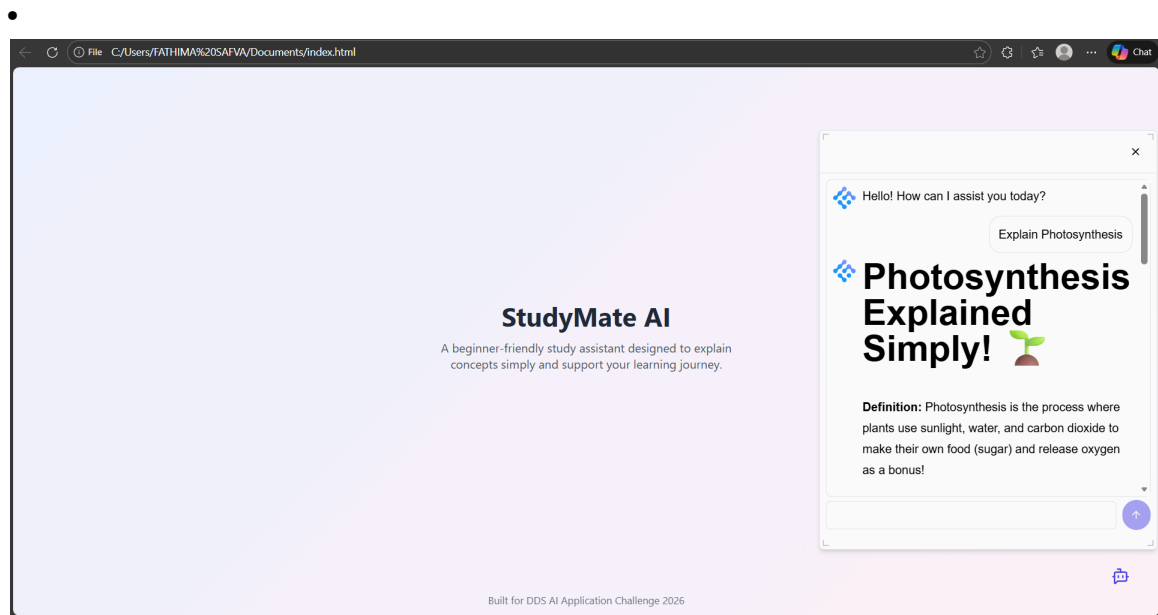
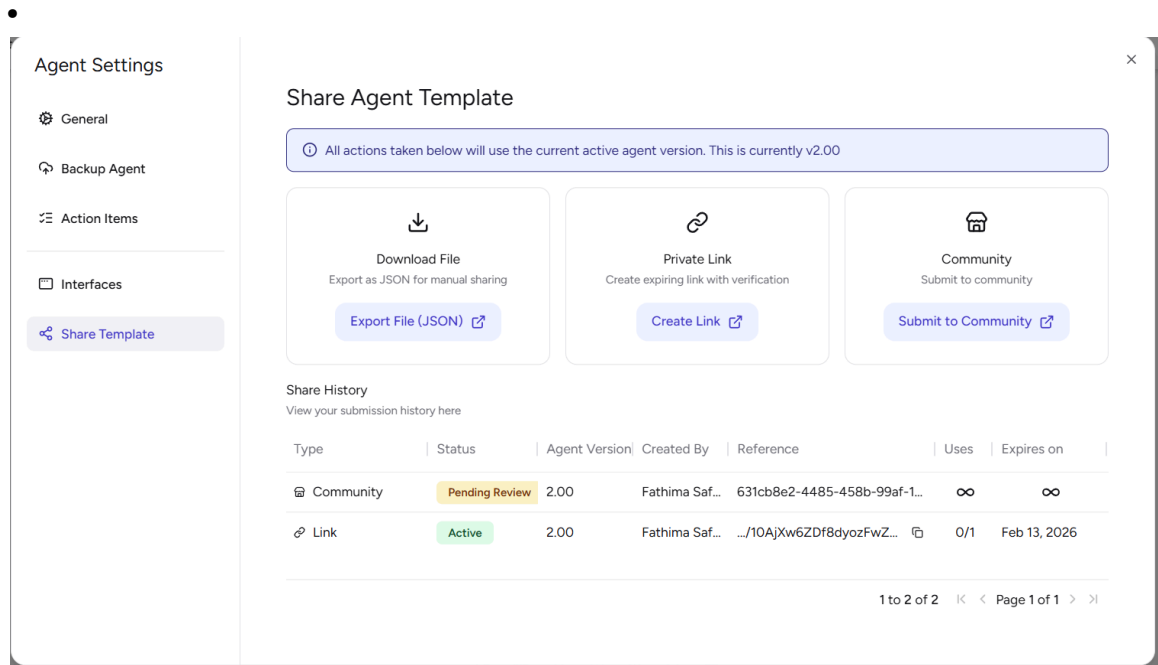
- Chose AIRIA hosting to ensure reliability and avoid unnecessary deployment complexity
- Prioritized clarity, stability, and explanation quality over adding new features

Blockers / help needed:

- None
- Final review support for submission checklist and explainer video framing

Evidence:





Day 7 — Final Review & Deployment

On Day 7, the project was finalized by publishing the latest stable version of the AIRIA workflow and validating all components in a live environment. The application was reviewed end-to-end to ensure consistent behavior, safe handling of inputs, and smooth user interaction.

Key activities completed:

- Published the final version of the StudyMate AI workflow (v2.0.0)
- Verified input handling and output consistency across multiple test cases
- Conducted basic smoke tests to confirm end-to-end functionality
- Reviewed security settings to ensure no sensitive information (API keys, internal IDs) is exposed
- Organized documentation, screenshots, and reference materials in the GitHub repository
- Prepared the project for final submission and public sharing


By the end of Day 7, the project reached a stable, presentable state with complete documentation and deployment readiness.

Day 8 — Final Submission & LinkedIn Sharing

Checklist:

- ☒ ☐ Final app link working
- ☒ ☐ Final repo is clean + documented
- ☒ ☐ Demo video recorded
- ☒ ☐ Final submission form completed
- ☒ ☐ LinkedIn post published + link shared

Artifacts / notes:

Final app URL	https://fsafva13-coder.github.io/studymate-ai/
Final repo URL	https://github.com/fsafva13-coder/studymate-ai
Demo video URL	 studymate-ai.mp4
LinkedIn post URL	https://www.linkedin.com/posts/fathima-safva-578294315_ddschallenge-aiprojects-nocodeai-activity-7425936289549455360-YYk3?utm_source=social_share_send&utm_medium=member_desktop_web&rcm=ACoAAE_0HywBYAwqY7msP7uPLFH1859ZKtrnrqE
Tweet/X URL (if applicable)	N/A
Reflection: what you learned	<p>How no-code AI agents can be structured for real user interaction</p> <p>The importance of prompt clarity for consistent and safe outputs</p> <p>End-to-end project thinking: idea → workflow → interface → testing → documentation</p> <p>How to present and document AI work clearly for reviewers and non-technical users</p>

Decisions made today (why):

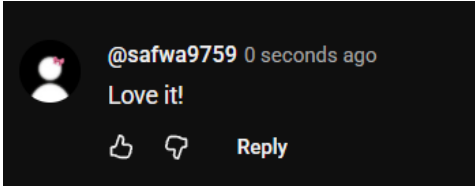

- Focused on stability, clarity, and documentation rather than adding new features
- Chose a simple, accessible interface to highlight learning impact and usability

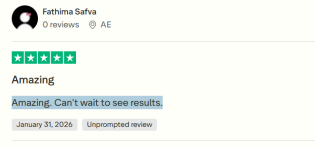
Blockers / help needed:

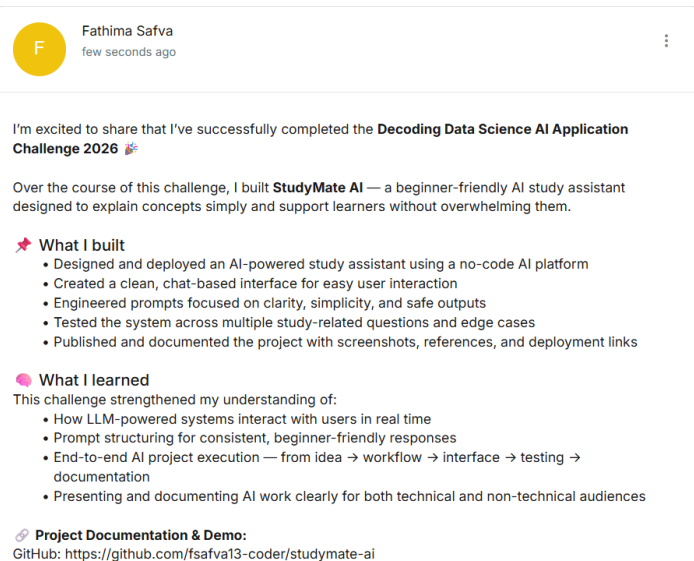
- None
- Awaiting final evaluation and feedback

10) Community Sharing Tracker (bonus points)

Use this to track your social proof and claim points.

Date	Platform	Post URL	What you shared	Tagged DDS?	Points claimed
06/02/2026	Youtube	Post from Decoding Data Science - YouTube		yes	
06/02/2026	Reddit	Reddit Review		yes	
28/01/2026	LinkedIn	LinkedIn post	<p>Excited to join the 8-Day AI Application Challenge starting 31 January!</p> <p>I'll be building a portfolio-ready AI application through guided daily checkpoints and showcasing the final project to judges. This challenge is a great opportunity to strengthen my hands-on AI skills, create real proof-of-work, and learn by building.</p> <p>Big thanks to Decoding Data Science for organizing this initiative. Looking forward to an intense learning experience, collaboration, and pushing my limits over the next 8 days 🚀</p> <p>hashtag #AI hashtag #ArtificialIntelligence hashtag #MachineLearning hashtag #AIProjects hashtag #BuildInPublic hashtag #LearningByDoing hashtag #TechStudents hashtag #PortfolioProject</p>	yes	

06/02/2026	Trustpilot	Review submitted	<p>Amazing. Can't wait to see results.</p> 	yes	
07/02/2026	LinkedIn		<p>I'm excited to share that I've successfully completed the Decoding Data Science AI Application Challenge 2026 🎉</p> <p>Over the course of this challenge, I built StudyMate-AI — a beginner-friendly AI study assistant designed to explain concepts simply and support learners without overwhelming them.</p> <p>📌 What I built</p> <ul style="list-style-type: none"> - Designed and deployed an AI-powered study assistant using a no-code AI platform - Created a clean, chat-based interface for easy user interaction - Engineered prompts focused on clarity, simplicity, and safe outputs - Tested the system across multiple study-related questions and edge cases - Published and documented the project with screenshots, references, and deployment links <p>🧠 What I learned</p> <p>This challenge strengthened my understanding of:</p> <ul style="list-style-type: none"> - How LLM-powered systems interact with users in real time - Prompt structuring for consistent, beginner-friendly responses - End-to-end AI project execution — from idea → workflow → interface → testing → documentation 	yes	

			<p>- Presenting and documenting AI work clearly for both technical and non-technical audiences</p> <p>🔗 Project Documentation & Demo:</p> <p>GitHub: https://lnkd.in/dvGVDdfZ</p> <p>Demo URL: https://lnkd.in/dGPVQAU4</p> <p>Huge thanks to Decoding Data Science for organizing a well-structured challenge and providing clear guidance throughout the journey.</p> <p>Looking forward to building on this learning and exploring what's next ✨</p> <p>#DDSCheckallenge #AIProjects #NoCodeAI</p> <p>#PromptEngineering</p> <p>#LearningInPublic #BuildInPublic</p> <p>#ArtificialIntelligence</p> <p>#TechJourney #StudentProjects</p>		
07/02/2026	DDS Community	https://academy.decodingdata.science.com/c/#/post/12373	 <p>Fathima Safva few seconds ago</p> <p>I'm excited to share that I've successfully completed the Decoding Data Science AI Application Challenge 2026 🎉</p> <p>Over the course of this challenge, I built StudyMate AI — a beginner-friendly AI study assistant designed to explain concepts simply and support learners without overwhelming them.</p> <p>★ What I built</p> <ul style="list-style-type: none"> Designed and deployed an AI-powered study assistant using a no-code AI platform Created a clean, chat-based interface for easy user interaction Engineered prompts focused on clarity, simplicity, and safe outputs Tested the system across multiple study-related questions and edge cases Published and documented the project with screenshots, references, and deployment links <p>💡 What I learned</p> <p>This challenge strengthened my understanding of:</p> <ul style="list-style-type: none"> How LLM-powered systems interact with users in real time Prompt structuring for consistent, beginner-friendly responses End-to-end AI project execution — from idea → workflow → interface → testing → documentation Presenting and documenting AI work clearly for both technical and non-technical audiences <p>🔗 Project Documentation & Demo: GitHub: https://github.com/fsafva13-coder/studymate-ai</p>	yes	

11) Reference Resources (from the challenge)

Core challenge walkthrough video: <https://www.youtube.com/watch?v=X4PitcxNDjE>

Python environment setup: <https://www.youtube.com/watch?v=D5XyQ96EgiM&t=759s>

GitHub basics: https://youtu.be/bV_9mr5O5bg?si=0oiiT9BZutcKCjnL

OpenAI API key setup: <https://www.youtube.com/watch?v=CVnTzj-qhCU&t=8s>

Model/LLM selection blogs:

- <https://decodingdatascience.com/choosing-the-right-gemini-model-for-your-ai-project-a-beginner-friendly-guide/>
- <https://decodingdatascience.com/openai-guide-to-use-which-model-for-tasks/>
- <https://decodingdatascience.com/how-to-choose-the-right-openai-model-gpt-5-complete-guide/>

AI Explorer RSVP:

<https://nas.io/artificialintelligence/events/ai-explorer-ai-demos-ai-use-cases-and-q-a-1767887350300>

12) Reviewer / Mentor Notes (optional)

Use this section if an instructor/mentor is reviewing your progress.

Strengths observed:

-

Areas to improve next:

-

Action items:

-