

AI-Generated Flashcards Comparison

1. Religion Flashcards(1 page)

Reference Document: `flashcard-test.pdf`

Concept	Original Document	gpt-4o-mini	gemini-2.0-flash
Western Wall	"a sacred wall in Jerusalem, Jewish people pray."	"A sacred wall in Jerusalem where Jewish people pray, considered highly significant in Judaism."	"A sacred wall in Jerusalem where Jewish people pray."
Shabbat	"The Jewish holy day of rest. On Friday evening and ending on Saturday evening."	"The Jewish holy day of rest, beginning Friday evening and ending Saturday evening."	"The Jewish holy day of rest, from Friday evening to Saturday evening."
10 Commandments	"10 rules of how people should live and what they should and should not do."	"A set of tenets in Judaism and Christianity dictating moral behavior."	"Ten rules outlining how people should live and what they should and shouldn't do."
Ramadan			

Concept	Original Document	gpt-4o-mini	gemini-2.0-flash
	"A time where Muslims fast, they can't drink water or eat food. They have a big meal at the end of the day. They do this to feel for the poor."	"An Islamic holy month of fasting from dawn to sunset to promote empathy for the needy and spiritual reflection."	"A time when Muslims fast, abstaining from food and drink from dawn till dusk."

Observations

- **gpt-4o-mini** provides more refined and educationally structured definitions, adding context.
- **gemini-2.0-flash** remains closer to the original document's wording.
- Both models accurately captured key concepts from the document.

2. Probability & Statistics Flashcards (124 pages)

Reference Document: **stemnotes.pdf**(124 pages)

Concept	Original Document	gpt-4o-mini	gemini-2.0-flash
Sample Space	"A sample space is the set of all possible outcomes of the particular 'experiment' of interest."	"The collection of all possible outcomes of a random experiment, often denoted as S."	"A sample space is the set of all possible outcomes of the particular 'experiment' of interest."
Event	"An event is a subset of the sample space."	"Any subset of a sample space; for example, if S is the	"An event is a subset of the sample space, thus a subset of possible

Concept	Original Document	gpt-4o-mini	gemini-2.0-flash
		sample space, A is an event when $A \subseteq S$."	outcomes for your experiment."
Union ($A \cup B$)	" $A \cup B$ denotes the subset whose elements are those that appear either in A or in B or in both. This subset is called the union of A and B."	"The union of two sets A and B, denoted $A \cup B$, is the set containing all elements that are in A, in B, or in both."	"If A and B are subsets, then $A \cup B$ denotes the subset whose elements are those that appear either in A or in B or in both."
Bayes' Theorem	"Bayes theorem concerns the situation where you have knowledge of the outcome and want to use it to infer something about the cause."	"A formula that describes the probability of an event based on prior knowledge of conditions that might be related to the event, given as $P(A$	$B) = (P(B$
Markov Chain	"A Markov chain is a sequence of probabilities, $\{P(0), P(1), P(2), \dots, \}$ where the Nth probability $P(N)$ depends only on the probabilities with numbers that are less than N."	"A Markov matrix is a square matrix used to describe the transitions of a Markov chain, where each entry represents the	"A Markov chain is a sequence of probabilities, $\{P(0), P(1), P(2), \dots, \}$ where the Nth probability $P(N)$ depends only on the probabilities with numbers that are less than N."

Concept	Original Document	gpt-4o-mini	gemini-2.0-flash
		probability of transitioning from one state to another.”	

Observations

- **gpt-4o-mini** provides well-structured and clear explanations but changes some terminology (e.g., Markov Chain vs. Markov Matrix).
- **gemini-2.0-flash** stays closer to the original wording.
- **gpt-4o-mini** covered fewer topics (22 flashcards vs. 29 by Gemini) but in greater depth.

3. File Size Limits and Upload Capacities

gpt-4o-mini (OpenAI)

- **File Upload Size Limit:**
 - Each file uploaded has a **hard limit of 512MB**.
 - Text and document files are capped at **2 million tokens per file**.
 - CSV files or spreadsheets cannot exceed **50MB**.
 - Images have a **limit of 20MB per image**.
- **Number of Files:**
 - Up to **20 files per GPT** for the lifetime of that GPT.

[Source](#)

gemini-2.0-flash (Gemini)

- **File Upload Size Limit:**
 - No specific size limit is mentioned, but there is a restriction on video uploads.
- **Number of Files:**
 - **Up to 10 video files per request**.

[Source](#)

4. Cost Comparison

gpt-4o-mini (OpenAI)

- **Pricing:**
 - **\$15.00 per 1 million input tokens**
 - **\$60.00 per 1 million output tokens**

[Source](#)

gemini-2.0-flash (Gemini)

- **Pricing:**
 - **Free tier available**
 - Paid tiers:
 - **\$0.075 per 1 million input tokens**
 - **\$0.30 per 1 million output tokens**

[Source](#)

5. Final Verdict

Category	Best AI Model	Reasoning
Faithfulness to Document	gemini-2.0-flash	Stays closer to original wording.
Clarity & Readability	gpt-4o-mini	Provides structured and educational definitions.
Flashcard Count	gemini-2.0-flash	Extracted more flashcards.
Best for Studying	gpt-4o-mini	More well-structured explanations and clearer context .
Speed & Efficiency	gemini-2.0-flash	Faster response time.

Category	Best AI Model	Reasoning
File Upload Capacity	gpt-4o-mini	Supports larger files (up to 512MB).
Cost	gemini-2.0-flash	Offers a free tier and lower token costs.