



# **RIT AI ANALYSIS**

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What AI Should RIT Implement?

RIT Business Analytics Competition 2025

# MEET THE TEAM



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# **RIT IS CONSIDERING ADOPTING A CAMPUS-WIDE AI SERVICE**

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We have been tasked with performing a comprehensive analysis based on a holistic report to assess available AI models and make a recommendation.



**“I predict that breakthroughs in AI will change the way we teach our classes and will alter most of our curriculum. Researchers will employ AI techniques in a multitude of application areas, making major leaps in discovery and innovation...Overall, we aspire to be an AI university, working within an ethical framework to invent a more prosperous, sustainable, and equitable future.”**

**—David C. Munson Jr., *RIT President***



# AI USE-CASES AT RIT

## STUDENTS \*\*

- Idea generation
- Guidance on projects and papers (proofreading, clarity, editing)
- Assistance in math problems and coding (debugging)
- Summarizing
- Research
- For fun

## RIT AS A WHOLE

- Advance research efforts in AI and other fields
- AI powered chatbot (“Ask Ritchie”)
- Virtual RIT kiosks and robots
- Support for AI in teaching
- Streamline lectures
- Teach students how to use AI as a tool
- Streamline FMS and dining services

\*\*Answers based on a survey of 48 students at RIT from a variety of colleges. 70.8% of respondents said they use AI for school.

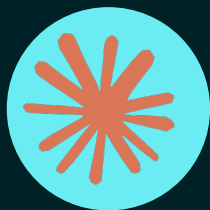
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# MOST POPULAR AI MODELS



**ChatGPT**

OpenAI



**Claude**

Anthropic



**DeepSeek**

High-Flyer



**Gemini**

Google

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# BENCHMARK CRITERIA

## ACCURACY

Correct predictions, intelligence measures, MMLU.

## DATA PROCESSING

Data processing speed and context window.

## PRIVACY & SECURITY

Ethicality and use of personal information.

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## PRICE

Cost of the paid version/subscription.

## SUSTAINABILITY

Environmental impact and mitigation efforts.

## EASE OF INTEGRATION

Implementation, technical support, customization.

# COMPETITIVE MATRIX

		Benchmark Criteria					
AI Software		Price	Data Processing	Sustainability	Privacy and Security	Ease of Integration	Accuracy
Weighting	100%	16%	21%	12%	18%	10%	23%
Chat GPT		5	8	4	6	9	8
Claude		5.5	5	5	7	6	5.5
DeepSeek		9	3	7	4	5	6
Gemini		7	8	5	8	8.5	7



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# ACCURACY (23%)

**Definition:** percentage of correct predictions made by a model, artificial intelligence index rankings, Massive Multitask Language Understanding (MMLU) rating.

## Importance

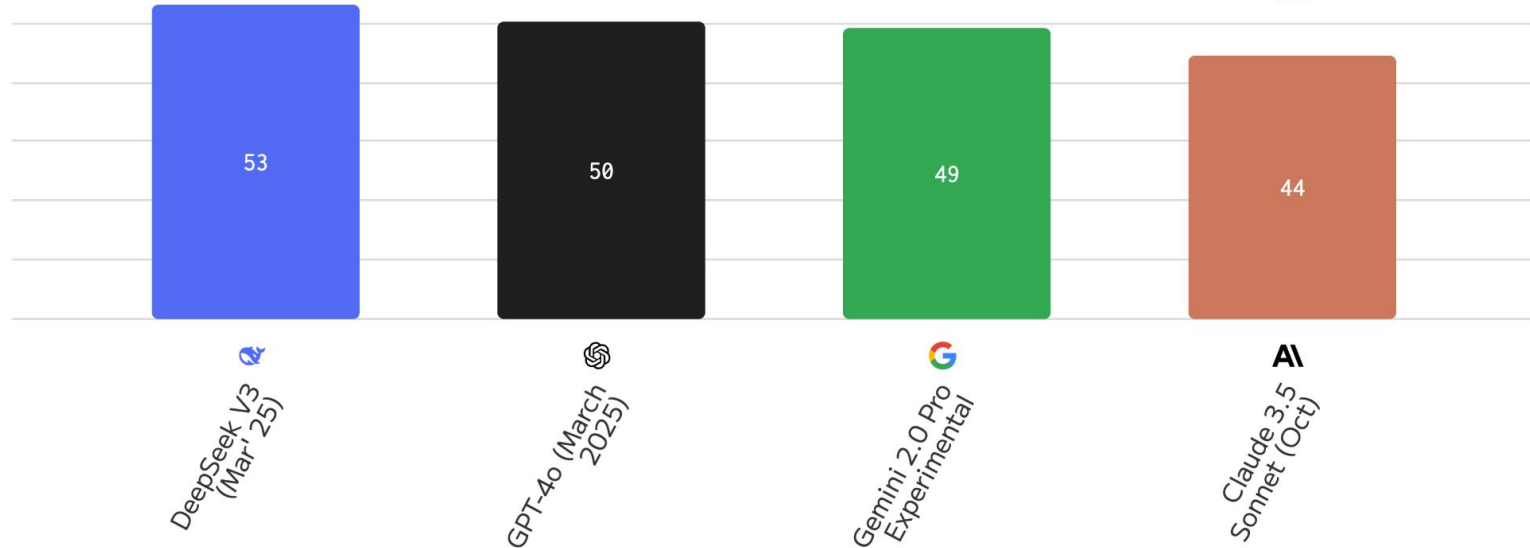
- Reduced bias
- Measure of effectiveness and reliability
- Meeting high educational standards
- Contributions to student learning



# Artificial Analysis Intelligence Index

Intelligence Index incorporates 7 evaluations spanning reasoning, knowledge, math & coding

 Artificial Analysis



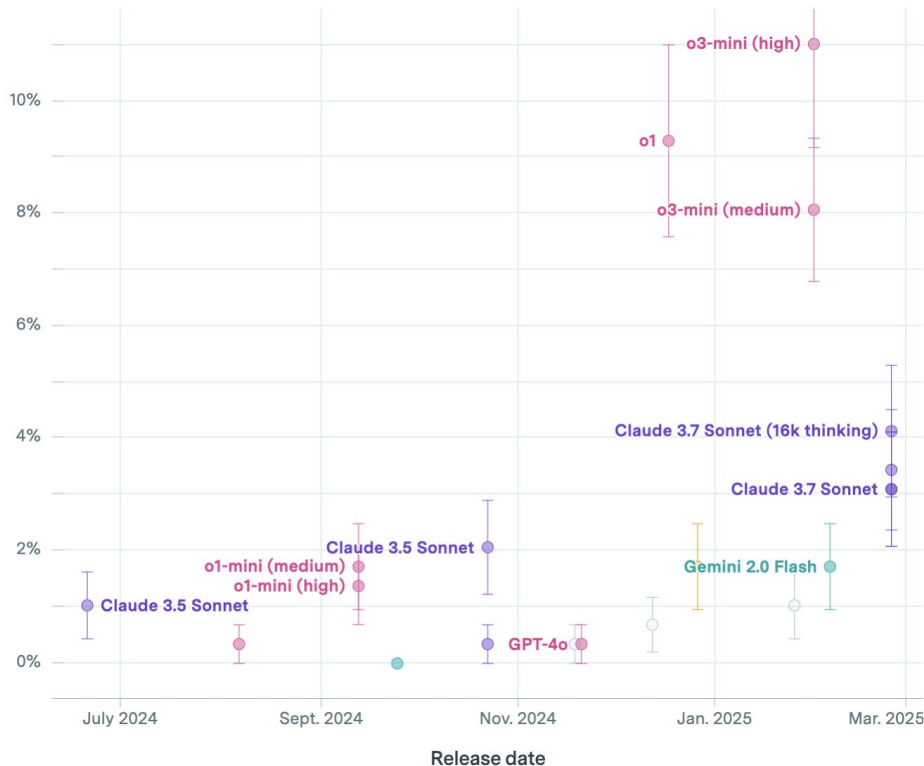
## AI performance on a set of expert-level mathematics problems

FrontierMath accuracy ⓘ

20 Results ⓘ

Organization

- Anthropic
- OpenAI
- Google ⓘ
- Alibaba
- DeepSeek
- xAI
- Mistral AI



**Average Accuracy**

**ChatGPT:** 4.429%

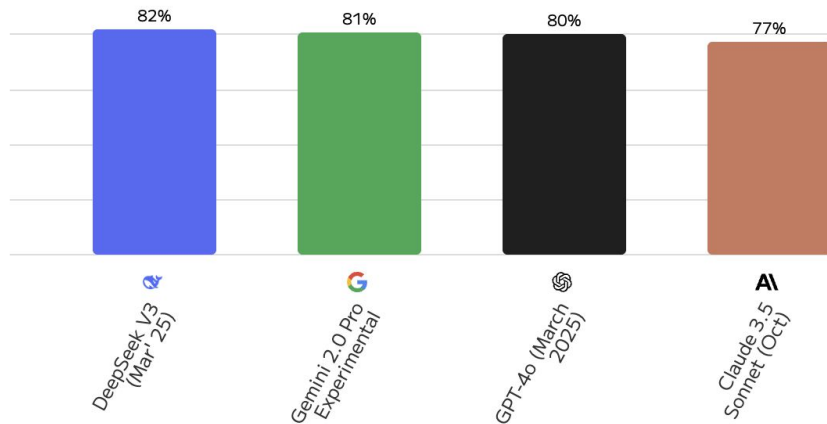
**Claude:** 2.167%

**DeepSeek:** 2%

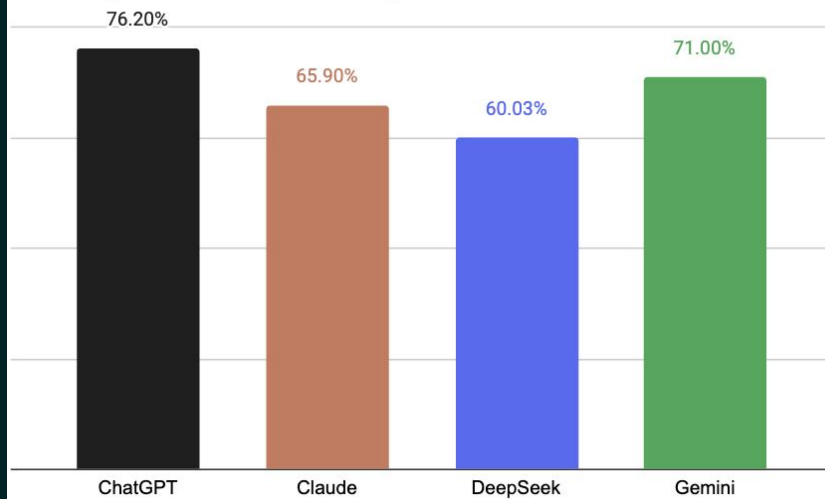
**Gemini:** 1%

# MASSIVE MULTITASK LANGUAGE UNDERSTANDING

MMLU-Pro (Reasoning & Knowledge)



Average MMLU-Pro Rating



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## DATA PROCESSING (21%)

**Definition:** collecting, organizing, and transforming raw data into meaningful information. Measured based on the processing speed and context window.

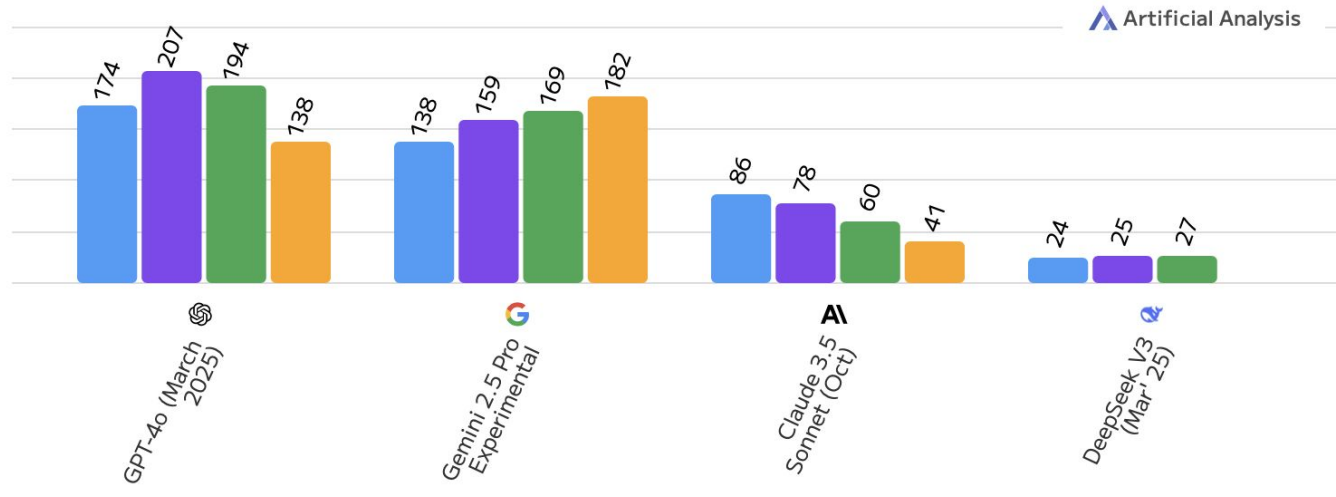
### Importance:

- Cleans and organizes raw data so the AI can learn effectively
- Improves accuracy, speeds up performance, and helps the AI make better decisions
- Without good data processing, AI models can be slow, biased, or unreliable.
- Allows for greater and more efficient use in learning

## Output Speed by Input Token Count (Context Length)

Output Tokens per Second; Higher is better

100 input tokens 1k input tokens 10k input tokens 100k input tokens



### Output Speed:

Tokens per second received while the model is generating tokens (ie. after the first chunk has been received from the API for models which support streaming).

### Input Token Length:

Length of tokens provided in the request.

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# PRIVACY AND SECURITY (18%)

**Definition:** how well the AI provider handles and protects user data. Ethicality and protection of personal information.

## Importance

- RIT is big on data security and values user protection
  - “RIT is dedicated to preserving the privacy of our community and ensuring the security of information” (RIT website, use of Generative AI)
- Implications of confidential information about the school, employees, or students being leaked
- Necessary to prevent breaches for research

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# COMPLIANCE POLICY OVERVIEW

**SOC 1:** Audit on organization's internal controls for user financial reporting to ensure accuracy and reliability.

**SOC 2:** Cyber Security compliance for how organizations should protect customer data.

**SOC 3:** Demonstration of organization's controls relevant to security, availability, and processing integrity without the specifics of the SOC 2 report.

**ISO/IEC 27001:** International standards for information security management systems, to identify risks and implement security policies and controls.

**ISO/IEC 42001:** International management system standard for AI, provides guidance for addressing AI challenges such as ethics and transparency.



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# COMPLIANCE POLICY OVERVIEW

**CSA STAR:** Cloud Service Alliance for Security, Trust, Assurance, and Risk. Third party assessment of security and compliance.

**GDPR:** European Union law aiming to protect privacy and security of EU citizens.

**HIPAA:** Health Insurance Portability and Accountability Act to protect patient health information.

	SOC 1	SOC 2	SOC 3	ISO/IEC 27001	ISO/IEC 42001	CSA STAR	GDPR	HIPAA
Google Gemini								
Chat GPT								
Claude								
DeepSeek								
Shows compliance on Site								
Compliance based on client								
Nothing provided to suggest compliance								

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## PRICE (16%)

**Definition:** cost associated with implementing and using the full, paid version of each AI service.

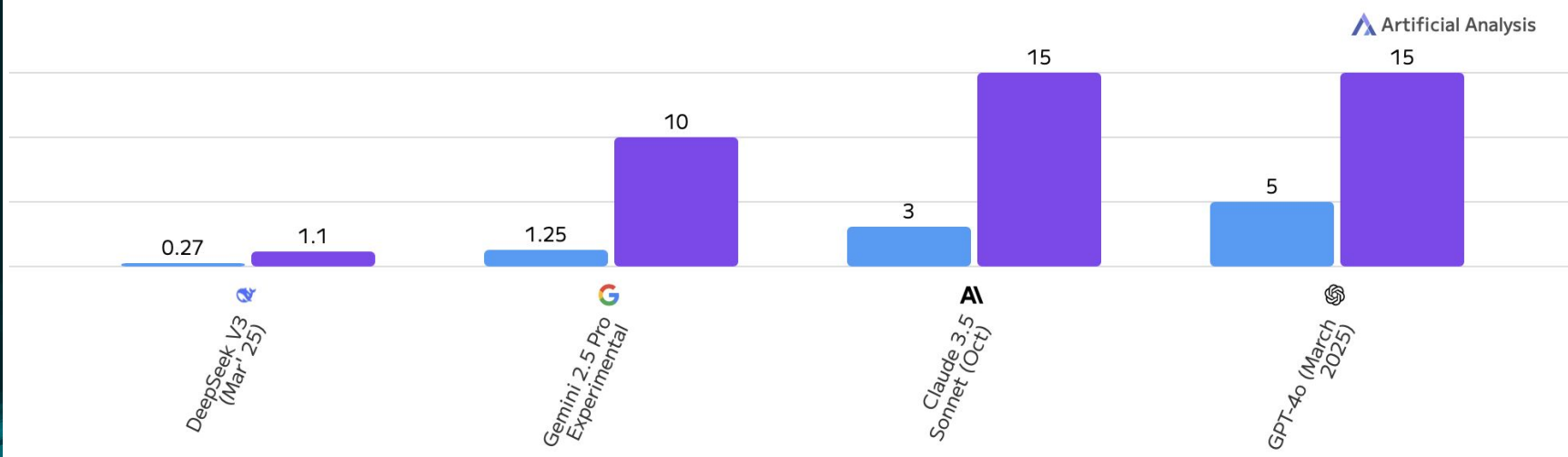
**Importance:**

- Cost is an extremely important factor due to the scale of use for the AI
- The chosen AI will be one for all students, faculty, and staff easily totaling over 22,000 people
- A difference of a few dollars per person could have huge financial implications
- Implementation may affect tuition rates and student perceptions/acceptance

## Pricing: Input and Output Prices

Price: USD per 1M Tokens

■ Input price ■ Output price



### Input Price (USD per million Tokens):

Price per token included in the request/message sent to the API

### Output Price (USD per million Tokens)

Price per token generated by the model (received from the API).



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# SUSTAINABILITY (12%)

**Definition:** Overall environmental impact (CO<sub>2</sub> emissions, water use, energy use) and company mitigation efforts.

## Importance

- AI has growing energy consumption and resource demands to train and operate
- Electronic waste and physical waste creation
- RIT prides itself in sustainability research, technologies, and practices.

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# SUSTAINABILITY OVERVIEW

## Chat GPT

- Commitment to reducing carbon footprint
- Initiatives include renewable energy, improving energy efficiency in data centers, and waste and water use reduction
- No data on specifically how the environmental and social impact are improved

## DeepSeek

- Smaller amount of resources than other models
- Optimized architecture, efficient processing, faster and streamlined training, less frequent retraining

## Claude

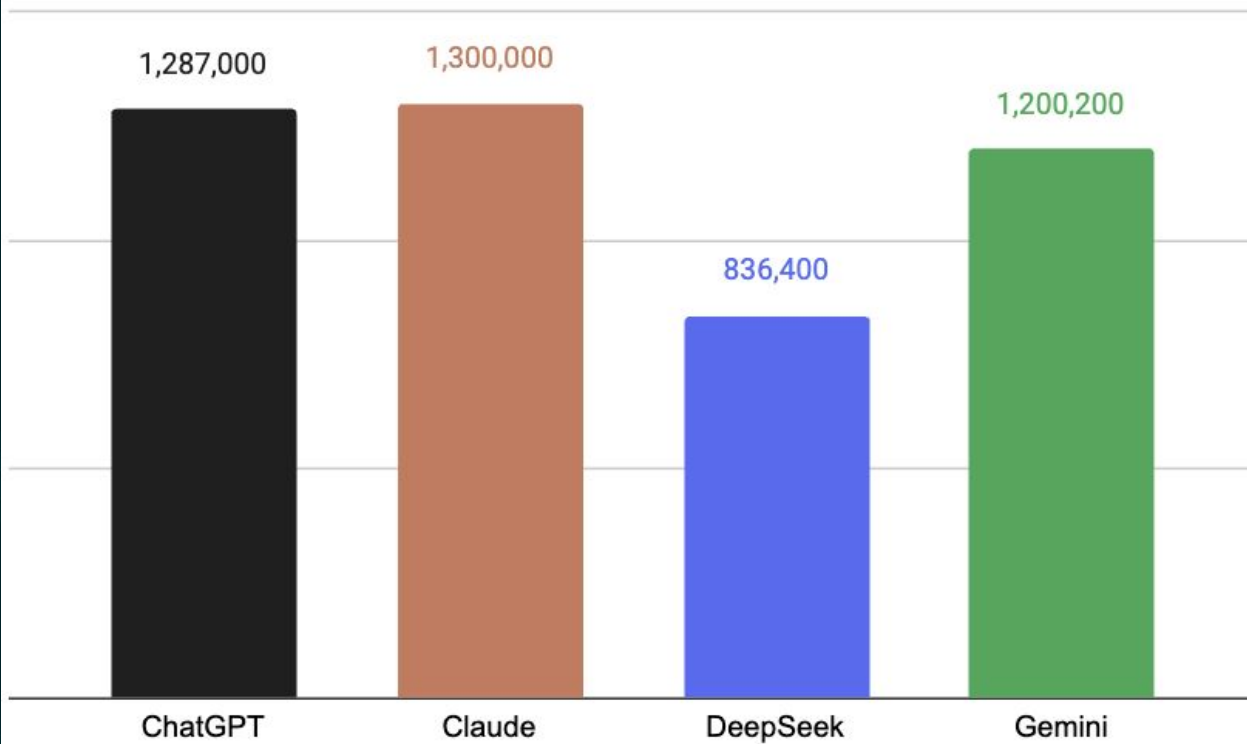
- Setting a standard by incorporating sustainability into all parts of operations
- Energy-efficient data centers, renewable energy sources, increased efficiency through hardware optimization, research to reduce impact

## Gemini

- Trying to make AI models, hardware, and data centers more energy-efficient
- Aim to reach net-zero emissions by 2030 (data centers and campuses)

**All companies have high water usage for training and operating the systems and have committed to utilizing AI in developing sustainable solutions in the world.**

## Energy Use To Train (kWh)





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## EASE OF INTEGRATION (10%)

**Definition:** how easily an AI system can be incorporated into preexisting software platforms. Includes implementation, technical support, customization.

### Importance

- Seamless integration reduces development time and associated costs
- Increased scalability across different departments , reduces reengineering
- Encourages widespread adoption
- Enhances customization for specific department needs
- With such widespread use, a fast response is needed if problems arise

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$$\frac{\text{EASE OF INTEGRATION RATING}}{((A+E+D+F)/20)*1}$$

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**(A) API documentation:**

manual on how to integrate different types of software so they communicate with one-another.

**(E) Ecosystem integration:**

how well the AI models connects to and works with various types of software.

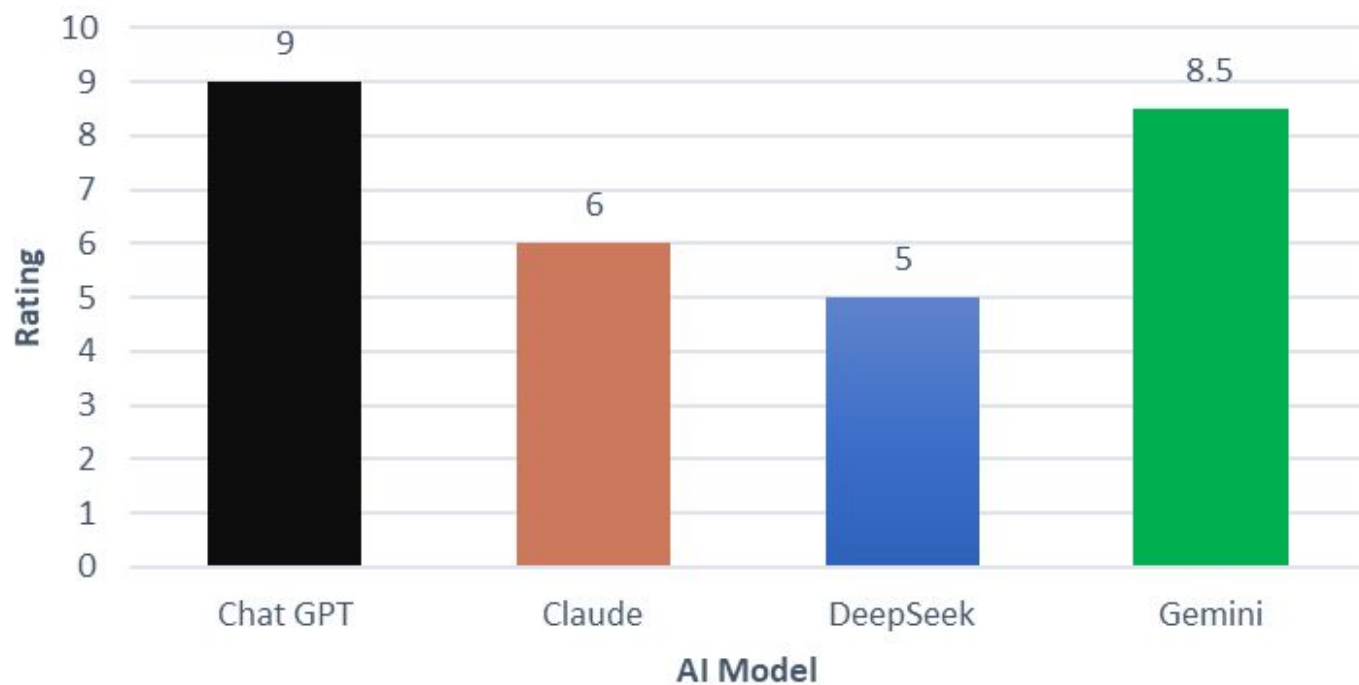
**(D) Developer support:**

tools, resources, and services model developer provides to effectively integrate and use models within a given system.

**(F) Flexibility/Customization:**

how easily the model can be altered to meet the demands of the organization intended for use.

## Ease of Integration Rating



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#3

CLAUDE

5.655



**#2**

**CHAT GPT**

**6.78**



**#1**

**GEMINI**

**7.3**



		Benchmark Criteria					
AI Software		Price	Data Processing	Sustainability	Privacy and Security	Ease of Integration	Accuracy
Weighting	100%	16%	21%	12%	18%	10%	23%
Chat GPT	6.78	5	8	4	6	9	8
Claude	5.655	5.5	5	5	7	6	5.5
DeepSeek	5.51	9	3	7	4	5	6
Gemini	7.3	7	8	5	8	8.5	7

# WHY GEMINI?



## HIGH RATING

Highest rating in data processing and privacy and security. Second highest in price accuracy, and sustainability.



## POPULARITY

One of the most popular AI tools with 118 million monthly visits in January 2025.



## PARTNERSHIP

RIT already has a Google Workspace for Education partnership, allowing for easier integration.

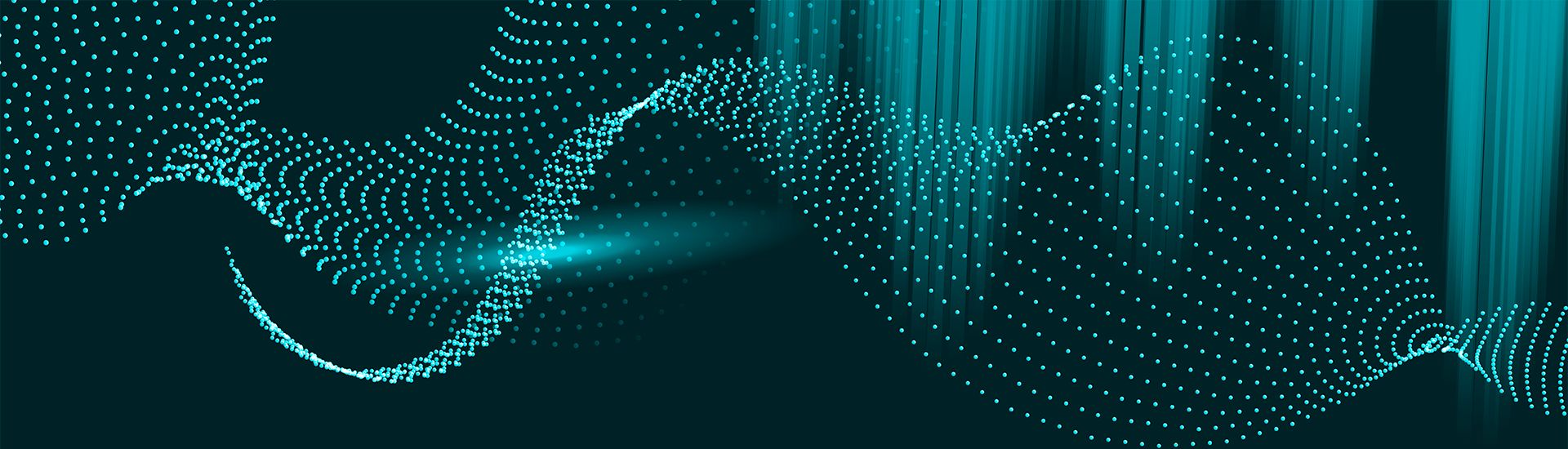


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# RECOMMENDATIONS

- Run hands-on transparent workshops
  - Train faculty members how to properly use AI as a part of their curriculum
  - Teach students how to use AI in the classroom
  - Specialized workshops (e.g., AI in research)
- Emphasize cost-savings
  - Potential to replace textbooks, promoting adoption by students
- Develop an effective plan for implementing AI guidelines for use in coursework
  - Ease students who are wary of AI
  - Update RIT AI use policy





**THANK YOU FOR  
LISTENING**

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