RIT Rochester Institute of Technology

SCB Business Analytics Competition 2025

Team Name: SmartAnalytix

Achyut Sridhar Kulkarni
MS in Data Science
Rochester Institute of Technology
ak6416@rit.edu

Sayali Rajesh Kale
MS in Data Science
Rochester Institute of Technology
sk4499@rit.edu

Executive Summary & Recommendations

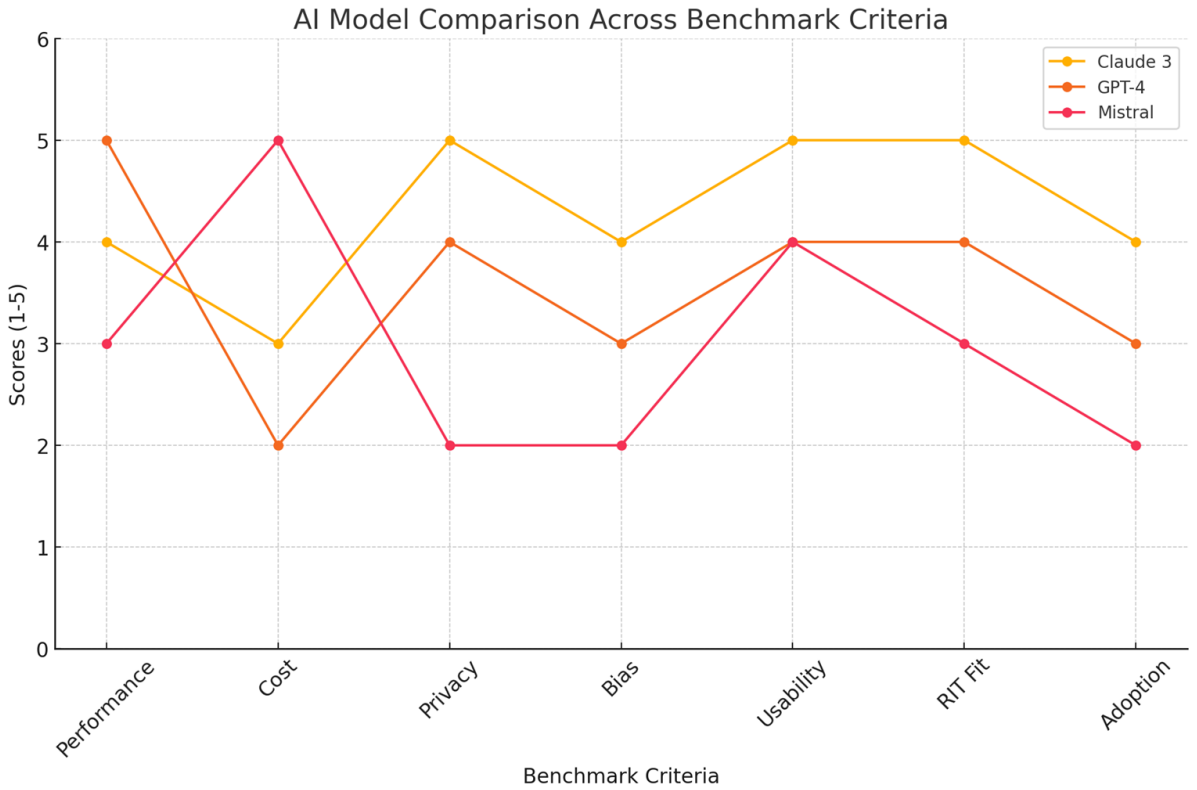
Choosing the Right AI Platform for RIT

- RIT seeks a campus-wide AI assistant to support students, faculty, and staff.
- We benchmarked 3 top LLMs: Claude 3, GPT-4, and Mistral.
- Evaluation based on: Performance, Cost, Privacy, Fairness, Usability, Strategic Fit, Adoption Potential
- **Top Recommendation: Claude 3**
  - Balanced performance and usability
  - Best-in-class privacy and compliance
  - Strong alignment with RIT’s mission

Benchmark Frameworks

Criteria	Description	Why it matters to RIT
Performance	Accuracy, speed, real-time inference ability	Real-time queries for tutoring, support
Cost	Licensing, hosting, usage fee	Budget-friendly for long-term university use
Privacy & Security	GDPR, FERPA compliance, data handling policies	Protect student/faculty data
Bias & Fairness	Model transparency, DEI concerns	Equitable results for diverse user base
Usability & Integration	Ease of use, API support, dashboard interface	Supports quick onboarding, less training
RIT Strategic Fit	Aligns with innovation, accessibility, and community goals	Fits mission and task force policies
Adoption Potential	Public trust, RIT community response, sentiment analysis	Will users actually adopt it?

Scoring Matrix and Ranking

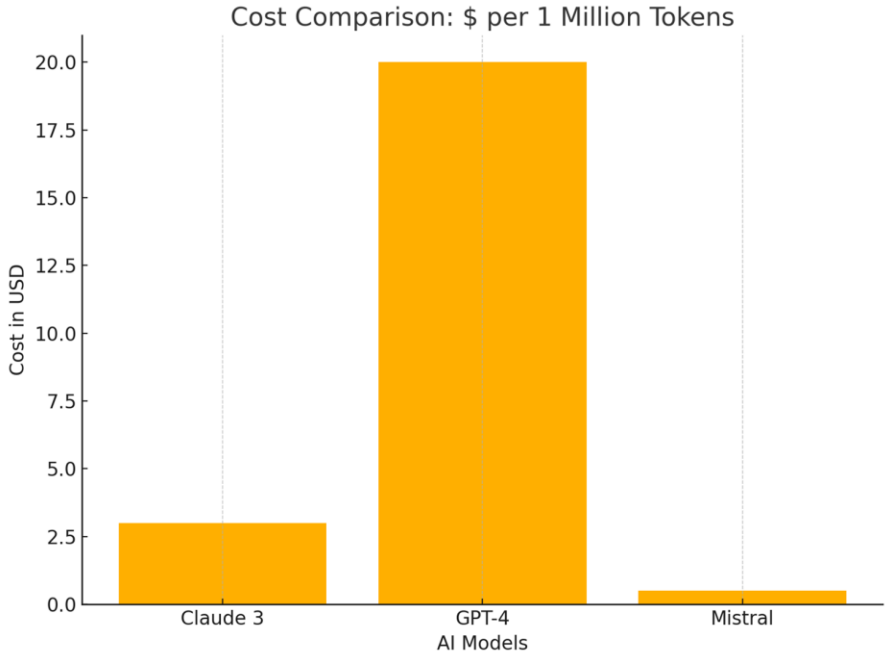


Performance Benchmarks

- **GPT-4:**
  - MMLU (Massive Multitask Language Understanding): GPT-4 achieves ~89, indicating strong academic and reasoning skills.
  - ARC (AI Reasoning Challenge): High score (~85), reflecting advanced problem-solving capability.
  - TruthfulQA: Highest (~82), meaning GPT-4 is more likely to generate truthful, accurate answers.
- **Claude 3:**
  - Delivers consistent and strong performance (~75–83), ideal balance for performance and cost
  - Suitable for academic and operational tasks at RIT.
- **Mistral:**
  - Scores are modest (~65–75).
  - Better suited for general usage or internal tools where high accuracy is not mission-critical.

Cost Analysis

- **Claude 3** offers a balanced pricing model (~$3 per 1M tokens), making it cost-effective for medium-scale deployment like universities.
- **GPT-4** has the highest cost (~$20 per 1M tokens), which may not be sustainable for widespread use across RIT.
- **Mistral** is open-weight and lowest cost (~$0.50 per 1M tokens) but may compromise on security or customization.



Privacy and Security Policies

Why it Matters for RIT:

- RIT handles sensitive student data, faculty IP, and confidential research.
- Compliance with FERPA, GDPR, and internal data governance is non-negotiable.
- Cloud-based AI tools may store data externally—raising legal and ethical concerns.

Privacy and Security Policies

Model	Hosting Options	Data Privacy & Controls	Compliance & Certifications
Claude 3	Anthropic API (cloud); Enterprise option with enhanced controls	Strong commitment to privacy, does not train on user data	GDPR, SOC 2, HIPAA-ready
GPT-4	Azure-hosted (via OpenAI API); Enterprise licensing possible	Data can be retained unless explicitly opted out	GDPR-compliant, Microsoft handles infra
Mistral	Open-weight, deployable on-premises or private cloud	Full control over data, no 3rd-party storage	No formal certifications

Use Cases for Stakeholders

Stakeholder	Example Use Case	Benefit
Faculty	Grading assistant	Saves time, ensures fairness
Students	Study helper / career coach	Personalized learning
Staff	IT ticket auto-responder	Operational efficiency
Admin	Policy summarization agent	Faster, accurate decisions

Marketing and Rollout Strategy

Adoption Strategy for Claude 3:

- Address trust issues: emphasize privacy, non-replacement of jobs
- Design onboarding plan: training workshops, AI ethics discussion
- Tailored messaging:
  - Faculty → "Teaching assistant, not teacher replacement"
  - Students → "Study coach that protects your privacy"
  - Admin → "Secure, compliant productivity boost"

Strategic Fit for RIT

Why Strategic Fit Matters:

- RIT is committed to responsible innovation, inclusivity, and preparing students for a tech-driven world.
- Any AI solution must support the academic mission, preserve ethical standards, and enhance operational excellence.
- RIT’s AI Taskforce and Strategic Plan emphasize:
    - Ethical and inclusive technology
    - Accessible learning for all
    - Future-proof digital transformation
    - Sustainability and cost-efficiency

Conclusion

- Top Choice: Claude 3
- Why: Strong privacy, balanced cost, fits RIT’s goals, easy to adopt
- **Claude 3 Pilot Plan:**
  1. Launch in 3 academic departments
  2. Deliver onboarding and ethics training
  3. Monitor usage + satisfaction metrics
  4. Iterate and expand to full campus

Success KPIs: Usage growth, data safety compliance, user satisfaction

Data Sources and Tools Used

Datasets:

- Hugging Face LLM Leaderboard: https://huggingface.co/spaces/open-llm-leaderboard/open_llm_leaderboard
- LLM Stats Dashboard: https://llm-stats.com
- Artificial Analysis AI Leaderboards: https://artificialanalysis.ai/leaderboards/models

Bias & Evaluation Tools:

- Google LLM Comparator: https://ai.google.dev/responsible/docs/evaluation/llm_comparator
- This or That (LLM Comparisons): https://thisorthis.ai