AI Recommendation Report

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AI in the Workplace
English 684-899
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Part 1. AI Visual Design – Study Abroad Flyer

In our given scenario, the Office of International Programs at Missouri State University is launching a new study abroad program focused on culture and communication in Dubai, United Arab Emirates. We are tasked with creating a promotional flyer to attract students to this opportunity, and this project explores the capabilities of AI image generation platforms used to complete this task.

For this task, we were given an example flyer for inspiration, and the flyer's *About the Progra*m section contained a list of varieties of activities students would experience in the program. I chose to depict these activities and compose them together in a single layout. The images generated included:

- **Dubai skyline (relief/background)** - Tests the platform's ability to render recognizable architecture in a stylized format suitable for a header background
- **Camel riding in the desert** - Combines multiple challenges: realistic human figures, animal anatomy, desert landscape, and culturally appropriate representation
- **Burj Khalifa** - Tests the platform's ability to render the world's tallest building with accurate architectural details and impressive scale/perspective
- **Grand Zayed Mosque** - Tests architectural accuracy for a real, iconic landmark and sensitivity in depicting religious sites
- **Louvre Abu Dhabi interior** - Challenges the AI with indoor lighting, art gallery atmosphere, and people viewing artwork
- **Desert sand dunes (driving)** - Tests landscape rendering, sense of motion/action, and possibly vehicles
- **Traditional village accommodations** - Requires culturally authentic architectural details and atmospheric accuracy

To evaluate which AI platform best served the project, I tested three platforms: ChatGPT, Google Gemini, and Grok.

Flyer Advertisement



Figure 1. *Final Study Abroad Flyer for Dubai Program Created Using AI-Generated Images*

Note. All images were generated using Google Gemini except the desert driving scene, which was generated using Grok.

Table 1 – Image Generation Comparison

Criteria	ChatGPT	Google Gemini	Grok
Ease of Use	4/5	5/5	4/5
Processing Speed	2/5	5/5	4/5
Visual Quality	4/5	5/5	4/5
People Rendering	5/5	5/5	2/5
Architectural Accuracy	5/5	5/5	2/5
Action Scenes	4/5	4/5	5/5
Contextual Awareness	4/5	5/5	4/5
Cultural Sensitivity	5/5	5/5	5/5
Customization Options	5/5	4/5	4/5
Overall Rating	**3.8/5**	**4.3/5**	**3.4/5**

Table 1. *Performance Comparison of AI Image Generation Platforms Across Key Criteria*

Note. Ratings based on 1-5 scale where 1 = poor performance and 5 = excellent performance.

Analysis

The criteria include ease of use, processing speed, visual quality, people rendering, architectural accuracy, action scenes, contextual awareness, cultural sensitivity, and customization options. These metrics were chosen because they directly impact the effectiveness of AI tools in creating promotional materials for real-world applications, where accuracy, visual appeal, and cultural respect are important.

Platform Analysis

Google Gemini emerged as the strongest performer overall, earning a 4.3/5 rating. Gemini excelled in nearly every category, particularly in visual quality, color vibrancy, and contextual awareness. When generating the Dubai skyline relief for the flyer header, Gemini produced clean outlines and appropriately stylized coloring that worked perfectly as a background element. For the camel riding scene, Gemini created a polished, brochure-quality image with natural poses, proper anatomy, and appropriate cultural representation. Most impressively, when prompted to create an interior shot of the Louvre Abu Dhabi, Gemini autonomously included the museum's iconic geometric dome with distinctive light patterns - a signature architectural feature I had not explicitly requested. This demonstrated sophisticated real-world knowledge integration, where the platform understood what makes the location distinctive and enhanced the image accordingly. Gemini's processing speed was also the fastest of the three platforms, and its consistent performance across all image types made it the most reliable choice for this project.

ChatGPT delivered solid, dependable results with a 3.8/5 overall rating. The platform produced accurate and appropriate images across all categories. The Grand Zayed Mosque image was faithful to the real structure, and the camel riding scene, while acceptable, featured slightly dim lighting compared to Gemini's vibrant output. ChatGPT's primary weakness was processing speed—it was noticeably slower than both competitors, which could be problematic when working under tight deadlines or iterating through multiple versions. However, its reliability and consistent quality make it a safe choice for projects where time is less critical, and accuracy is essential.

Grok showed a mixed performance with a 3.4/5 overall rating, revealing clear strengths and significant weaknesses. Grok excelled at landscape and action scenes, producing the most dynamic desert driving image with impressive sand spray and a genuine sense of motion and excitement. However, the platform struggled considerably with human figures and architectural accuracy. During the camel riding generation, Grok produced an image where two students appeared as conjoined twins sharing a single camel, and the third figure had a noticeably disfigured smile. When rendering the Grand Zayed Mosque, Grok hallucinated a non-existent architectural framing structure, presenting the mosque as viewed through arches of a building that does not exist in reality. These failures raise serious concerns about reliability, particularly for marketing materials promoting real destinations where accuracy matters.



Figure 2. *Example of Grok's Failure in People Rendering: Conjoined Twin Effect*

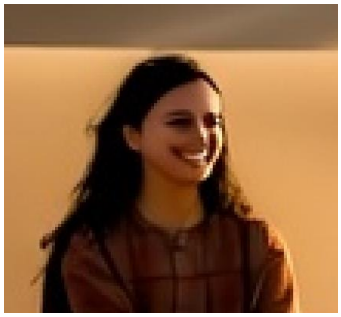


Figure 3. *Example of Grok's Difficulty with Facial Features: Disfigured Smile*

Ethical Considerations

The question of authenticity in AI-generated imagery raises concerns. While these images are not photographs, they are presented in a photorealistic style that could mislead viewers into thinking they represent actual program experiences. For academic integrity and truth

in advertising, it may be important to disclose when promotional materials use AI-generated rather than authentic photography.

Recommendations

Google Gemini is the clear top choice. Its combination of speed, visual quality, contextual intelligence, and consistency makes it ideal for creating professional marketing assets quickly and reliably. The platform's ability to understand context and add appropriate details reduces the need for extensive prompt engineering and multiple iterations.

Part 2. Data Visualization and Storytelling

In this scenario, we are working for the university's Innovation and Technology Committee, reviewing data about student awareness, trust, and excitement about AI.

For this data visualization component of the project, I evaluated two AI platforms - ChatGPT and Claude (Sonnet 4.5) - for their ability to analyze survey data and create meaningful visualizations. The dataset contained 50 student responses measuring AI awareness, trust, excitement, and concerns about job loss. The goal was to create at least three charts that effectively communicate key insights from this data.

I selected ChatGPT and Claude specifically because both are conversational AI platforms capable of generating code for data visualization, but they approach the task differently. ChatGPT primarily uses Python with matplotlib for creating static plots, while Claude generates JavaScript-based interactive visualizations within its artifact system. This comparison allowed me to evaluate not just the technical output, but also the workflow, user experience, and practical applicability of each platform.

The evaluation criteria included ease of use, file handling capabilities, error rate and reliability, visual quality, interactivity, customization flexibility, narrative insight generation, and code portability. These metrics reflect both the technical capabilities of the platforms and the practical considerations for users who may need to create data visualizations quickly and effectively without extensive programming knowledge.

Generated Charts

Average Student Ratings Across Key Metrics

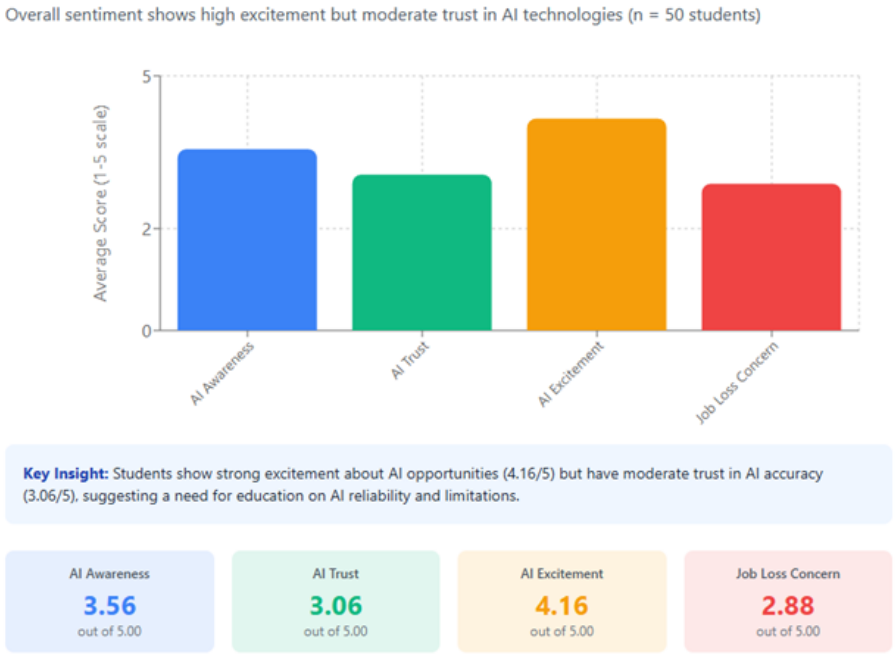


Figure 4. *Average Student Ratings Across Key AI Perception Metrics*

Relationship Between AI Awareness and Trust

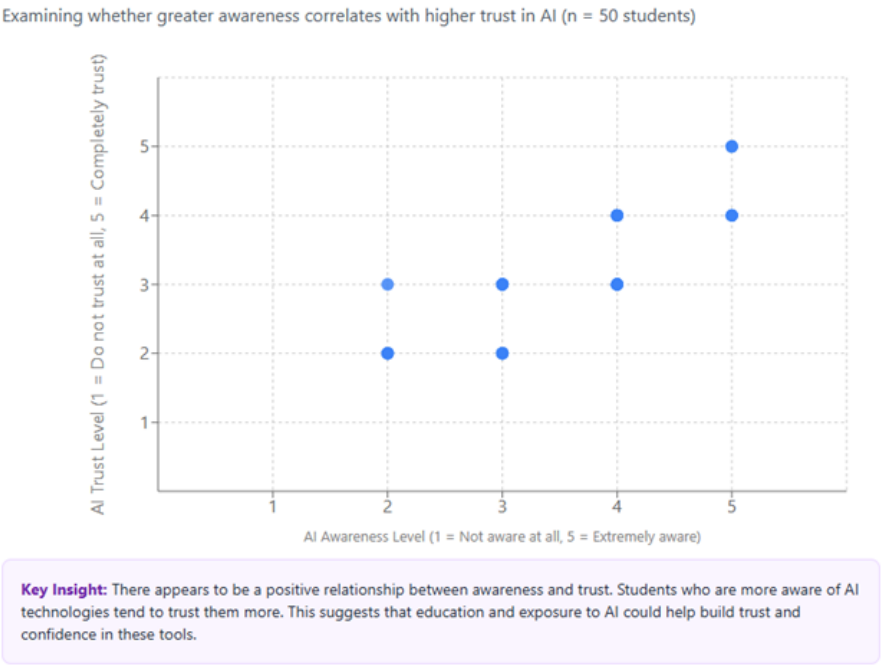


Figure 5. *Distribution of Student Trust Levels in AI Accuracy and Reliability*



Figure 6. *Scatterplot of the Relationship Between AI Awareness and Trust Levels*

Table 2 – Data Visualization Comparison

Criteria	ChatGPT 5	Claude Sonner 4.5
Ease of Use	5/5	2/5
File Handling	5/5	2/5
Error Rate/Reliability	5/5	3/5
Visual Quality	3/5	5/5
Interactivity	1/5	5/5
Customization Flexibility	3/5	4/5
Code Portability	5/5	3/5
Overall Ranking	3.6/5	3.6/5

Table 2. *Performance Comparison of AI Platforms for Data Visualization Tasks*

Analysis

ChatGPT demonstrated exceptional ease of use and reliability throughout the visualization process. When provided with the Excel dataset and clear instructions about desired chart types, ChatGPT consistently generated working Python code using matplotlib on the first attempt. The platform handled file reading seamlessly, correctly processed the data, and produced accurate visualizations without requiring extensive troubleshooting or iteration.

The code was clean, well-commented, and portable—meaning I could easily copy it and run it in a local Python environment if needed. This straightforward workflow makes ChatGPT ideal for users who need quick, functional visualizations without friction.

However, ChatGPT's outputs were aesthetically basic. The matplotlib charts were functional but lacked visual polish, using default color schemes and standard formatting. The visualizations were entirely static, offering no interactivity such as tooltips, zoom capabilities, or dynamic filtering. While the charts communicated the data accurately, they lacked the professional presentation quality that might be desired for reports, presentations, or publications. Additionally, ChatGPT provided minimal contextual interpretation of the data—it created the charts as requested but didn't offer accompanying insights or narrative summaries about what the data revealed.

Claude (Sonnet 4.5) produced significantly more polished and visually engaging outputs. The final visualizations featured thoughtful color schemes, clean typography, professional layouts, and interactive elements that enhanced data exploration. Each chart included contextual "Key Insight" boxes that provided narrative interpretation of the findings, helping readers understand not just what the data showed but what it meant. For example, the average ratings chart highlighted that students showed strong excitement about AI opportunities but moderate trust in AI accuracy, suggesting a need for education on AI reliability and limitations. This combination of visualization and interpretation created a more complete data storytelling experience.

However, Claude's workflow presented significant challenges. The platform struggled with file access within its artifact environment—the code written in artifacts couldn't directly read the uploaded Excel file. This technical limitation required multiple error iterations and ultimately necessitated a workaround: hardcoding the dataset values directly into the artifact code. This process was time-consuming, frustrating, and created a less elegant solution than ChatGPT's straightforward file reading. The higher error rate and troubleshooting requirements mean Claude has a steeper learning curve and may frustrate users who expect immediate results. Additionally, while the JavaScript-based visualizations are impressive in the browser-based artifact viewer, they are less portable than Python code—users can't easily export and run them in other environments without additional setup.

Trade-offs and Considerations

The comparison between these platforms reveals a fundamental trade-off between **ease of use** and **output quality**. ChatGPT excels at getting users from question to working visualization quickly and reliably, making it ideal for exploratory data analysis, rapid

prototyping, or situations where time is limited. The matplotlib outputs, while basic, are perfectly adequate for internal reports, homework assignments, or initial data exploration.

Claude excels at producing publication-ready visualizations with professional aesthetics and meaningful interpretation. The interactive features and narrative insights make the charts more engaging and informative for audiences. However, achieving these results requires patience through technical hurdles and may not be worth the effort for simple, quick analysis tasks.

Ethical Considerations

Both platforms handled the fictional survey data appropriately and accurately represented the findings without introducing bias or distortion. The data visualization process itself raised fewer ethical concerns than the image generation task in Part 1, as the goal was factual representation of quantitative data rather than creative interpretation.

Recommendations

Based on this analysis, I offer the following recommendations:

For quick exploratory analysis or homework assignments: ChatGPT is the clear choice. Its reliable file handling, minimal error rate, and straightforward workflow make it ideal when you need functional visualizations quickly. The matplotlib outputs are more than adequate for assignments, internal reports, or initial data exploration where polish is less important than speed and accuracy.

For presentations, publications, or client-facing materials: Claude produces superior results when visual quality and narrative impact matter. The professional aesthetics, interactive features, and contextual insights create more engaging and informative data stories. However, users should budget extra time for troubleshooting and be prepared to work through technical challenges.