Real or Fake : Identify the AI

Colton Chambers
Eastern Hancock Elementary
Greenfield

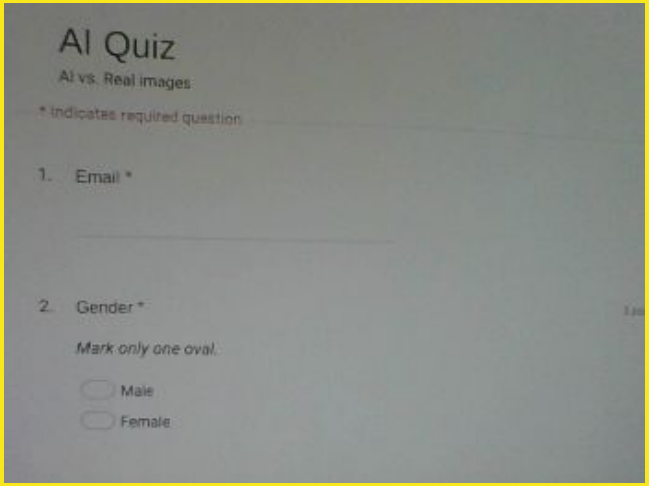
Research topic: I would like to know what age group can identify AI most accurately. I chose this topic because AI is growing and even being used in schools. I believe today's youth and future generations would benefit from learning how to identify AI and discern between credible information and deceptive content.

Question: Which age group can identify the AI images most accurately.

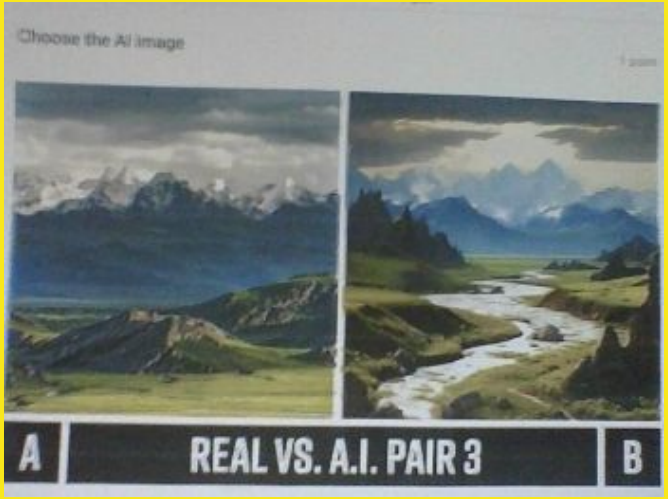
Hypothesis: I think today's pre-teens and teenagers will know which image is AI because they grew up with more social media and AI, than if you were born before social media and AI was common.

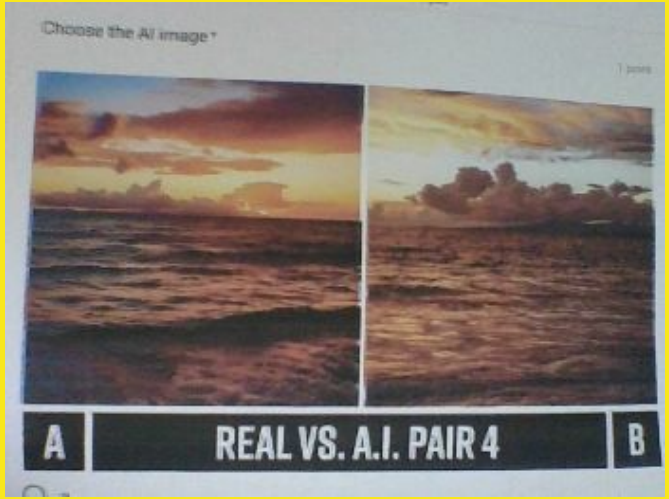
Procedure

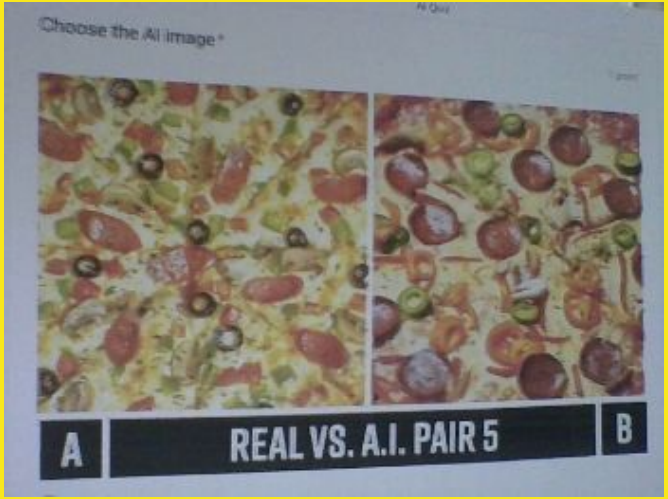
I created an AI quiz using two online sources to obtain 10 AI images, and 10 real images. I surveyed 80 volunteers via e-mail. Volunteers provided age and gender anonymously. Volunteers were asked to identify which image was AI. My control was the 10 images I used to test people, and my quiz. My independent variable is the volunteers age, and the dependent variable is the different age groups, and their ability to identify the AI images. I collected data by using Google Forms, to determine what age group was able to identify the 10 AI images most accurately. I used google sheets to make a spreadsheet showing volunteer's scores and their ages. I made graphs showing age ranges and their score, showing a teen group, adult group, and a senior group. I used each age group's scores to determine the averages.



Sample images from quiz.





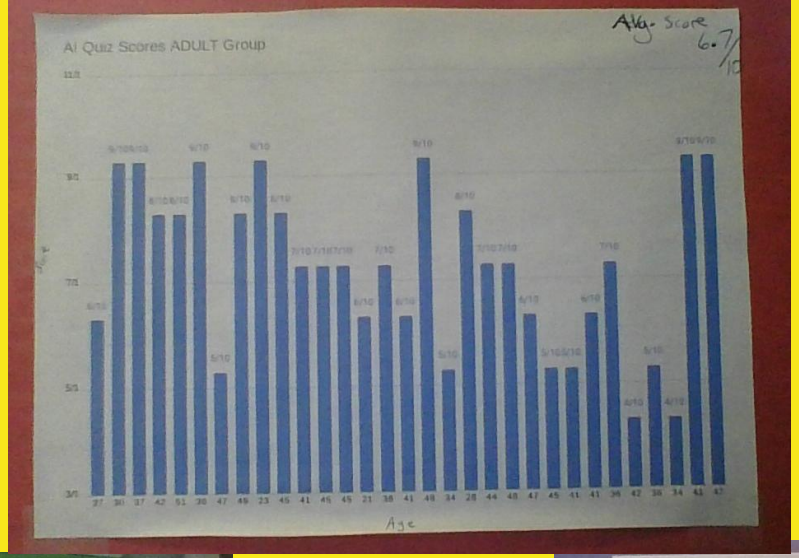


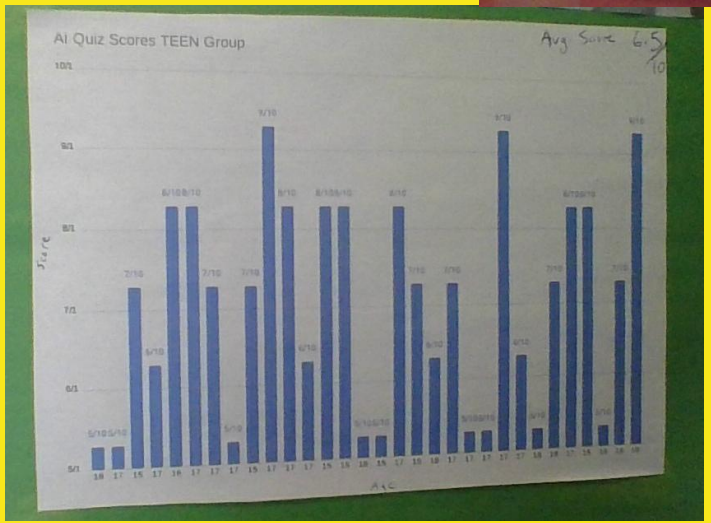
Data

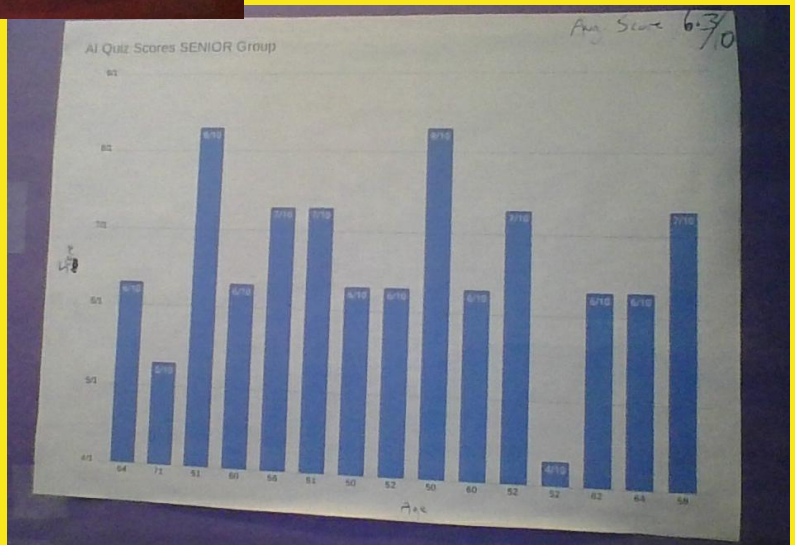
I used Google sheets to make my column graphs, to show the scores and ages of the volunteers. The adult group scored highest with an average score of 6.7 out of 10. The teen group was a close second with 6.5 out of 10, and the senior group last, with 6.3 out of 10. I noticed the average scores did not differ greatly overall.

Overall Scores

Data


AI Quiz Scores ADULT Group
Avg. Score 6.7/10
Score
Age


AI Quiz Scores TEEN Group
Avg Score 6.5/10
Score
Age


AI Quiz Scores SENIOR Group
Avg Score 6.3/10
Age

Results

I collected my data using a spreadsheet and graphs to find the averages for each age group. My control stayed the same throughout the experiment. I had 80 volunteers submit responses to my quiz. The teen group consisted of 32 volunteers, ages 15-18, with an average score of 6.5 out of 10. The adult group consisted of 32 volunteers, ages 20-49, with an average score of 6.7 out of 10. The senior group had sixteen volunteers, ages 50 plus, with an average score of 6.3 out of 10. The overall average score for all ages and participants was 6.59 out of 10. The Adult group averaged highest out of all three groups.

Conclusion

I found the adult group got the highest average, unlike I thought. The averages were 6.3 for seniors, 6.5 for the teens, and 6.7 for the adults. My graph that includes all participants, shows no big spikes in their scores. There were alot of people and a lot of different ages, but the average did not vary much for each group. Some variables were not included in the experiment. For example, knowing how long each volunteer took on the quiz, and each volunteers exposure to social media and AI. The overall average score for all ages and participants was 6.59. AI images of scenery and nature were most difficult to identify. It appears people currently do fairly well at identifying what is fake and what is not.

The Future

As technology and AI continues to grow, perhaps today's youth need to be taught how to identify AI. This is important in maintaining credibility of information and identifying deceptive media and content, in an ever changing technological world. In the future if I were to repeat this study, I would like to know how active or familiar participants are with social media and AI. I could then determine if the participant’s exposure to social media and AI effects their score. I would also have my quiz timed for each volunteer, so everyone has an equal amount of time to identify each image.

Bibliography

Adams, B (2023, August 14). Real vs. AI Images: Testing Human Perceptions of Reality. streamline.us/blog/real-vs-ai-images/

Jacobson, J (2024, February 13). Real or AI Quiz: Can You Tell the Difference? britannicaeducation.com/blog/quiz-real-or-ai