



Colorado Science and Engineering Fair

2025 Individual Project Abstract Form

Please print 2 copies of the completed form. Sign both copies, keep 1 for your notebook and submit 1 copy to your Regional Fair Director with your other paperwork.

Title of Project: Is AI Racist? Sexist?

Finalist's Name: Madeleine Hahn

School and City: Flagstaff Academy Charter School Longmont, Colorado 80501

Sponsor's Name: Lauren Liedtke

Category: Mathematics & Computer Sciences

Division: Junior (grades 6 - 8)

Abstract (250 words or less):

Artificial Intelligence is a huge part of our growing society, but can it spread misinformation? Could it even have prejudice against certain groups? People everyday log onto AI to create images for various reasons. Madeleine Hahn's project aimed to figure out if Artificial Intelligence disproportionately represents different races and genders.

One of the major focuses of this project was to inform people of the misinformation that AI can spread in order to avoid the technology from corrupting society. To do this she first had to look into problems that had already appeared in this area. This includes articles on how people feel that AI affected them, AI being taken down for prejudice, etc.

After selecting three AI sites, Madeleine conducted her experiment by generating 50 images from each, recording the race and gender as she went. She looked for patterns and commonalities between images and sites. She then compared this data to the Bureau of Labor Statistics.

Overall, it was shown that there was both gender and racial bias but more so gender. This was discovered because the statistics from the AI differed from the Bureau of Labor Statistics outside of a reasonable margin of error. The results for races were closer to the Bureau of Labor Statistics than gender. She also noticed differences between the sites and how they represented certain genders/races, such as complexion and clothing styles. This is really important data because it can be used to teach people why to use AI with caution.

I hereby certify that the above statements are correct and the information provided in the Abstract is the result of one year's research. I also attest that the above properly reflects my own work.

Finalist's Signature:

Date:

In addition, all students must complete the ISEF Student Checklist (1A), Research Plan, Approval Form (1B), and Checklist for Adult Sponsor (1), and any other ISEF forms required for this type of project. See the International Rules and Guidelines for form requirements. Return COPIES of all of these forms to your Regional Fair Director with you Finalist Verification/Permission Form. **A signed copy of this form must be included in your notebook.**