AI Final Exam - Ben Shillington

1. Grad Paper Questions
    a. Understanding Emotional Body Expressions via Large Language Models Yamuna Bobbala
    b. **Input Motion:** A person is sitting down in a chair, with their legs together, their right hand rubbing their sternum, and their left arm positioned across their stomach/torso.
    LLM Output: *Emotion – Anxiety*
    "Hands are rubbing the sternum, a self soothing limbic reaction to stress"
    c. Body motion is treated like a language, where the LLM converts different skeleton movements into semantic tokens. The LLM uses these tokens to classify and explain the body language.
2. Attendance AI
    a. I downloaded the data and moved it into my CSCE580 repository under the folder "data-attendance", adding the folder to my .gitignore file because the repo is public. As my attempt to use the Llava model failed (explained below), I recorded the dates and attendance count manually and inputted it into ChatGPT to create a CSV file. I opted not to upload the images due to privacy concerns.
    b. I initially attempted to use the Llava model, cloning it into my CSCE580 repo as a submodule. I followed the instructions on the README to set it up on my computer, but ran into an issue regarding the CUDA version of my GPU. Over 4 hours, I attempted to troubleshoot this by downgrading my GPU drivers, but I was facing too many issues with other applications that relied on my current drivers. In the end, I decided to process the data through ChatGPT via my university account. For privacy reasons, I opted to only input the dates and student counts of each class into ChatGPT and have it create a csv file (I used the LLM to create the csv file to avoid any formatting errors). I then wrote a script that processed the answers to the questions. I used the following prompt in ChatGPT: Create a csv file for the data below. The general format of the data is: "day-month-year - count"
    c. Attendance Data:
        i. There are 26 unique classes. The dates are: ['2025-08-19', '2025-08-21', '2025-08-26', '2025-08-28', '2025-09-02', '2025-09-04', '2025-09-09', '2025-09-11', '2025-09-16', '2025-09-18', '2025-09-23', '2025-09-26', '2025-09-30', '2025-10-02', '2025-10-07', '2025-10-14', '2025-10-16', '2025-10-21', '2025-10-23', '2025-10-28', '2025-10-30', '2025-11-04', '2025-11-11', '2025-11-13', '2025-11-18', '2025-11-20']
        ii. The median class attendance is 35.5

iii. Lowest Attendance Dates:

	date	count
25	2025-11-20	16
23	2025-11-13	19
20	2025-10-30	22

Highest Attendance Dates:

	date	count
1	2025-08-21	49
2	2025-08-26	45
14	2025-10-07	45

iv. October 7th is the date with the second highest attendance (tied with August 26th), which was when Quiz 2 was conducted. The highest attendance date is August 21st, which was the 2nd day when attendance was recorded.

d. If I was given more time, I could've found a safe way to downgrade my GPU drivers, which would've allowed me to use the Llava model. I could've also started a new instance of Linux with the required drivers. After getting the pre-built LLM to work and testing its original performance, I would've improved its performance by training it with other text data unrelated to the class.