**Day 4 tasks**

**Task 1**

**Example of a Left-Handed Person Writing**

Let's generate an image description of a left-handed person writing.

*A young adult with short curly hair is sitting at a wooden desk, writing in a notebook with their left hand. Their hand is slightly smudging the ink as they write. The desk has a cup of coffee and a small potted plant beside the notebook. The person appears focused, with a slight tilt to their wrist, adjusting for the angle of writing. The background is a cozy home office setting with warm lighting.*

**Identifying Bias in the Response**

* The description assumes that left-handed writing results in **smudging**, which is common but not universal.
* The description does not **contrast left-handed writing with right-handed writing**, potentially reinforcing the idea that right-handed writing is the default.
* The fact that left-handedness needs to be explicitly mentioned could indicate an **implicit bias** toward right-handed dominance.

**Research & Documentation of Common AI Biases**

1. **Demographic Bias**
   * AI models may generate responses that favor certain racial, gender, or cultural groups, leading to underrepresentation of others.
   * Example: Generating more male CEOs in business-related queries.
2. **Confirmation Bias**
   * AI models may reinforce existing stereotypes by over-relying on prevalent data.
   * Example: Suggesting nurses are mostly female or engineers are mostly male.
3. **Selection Bias**
   * AI training data may come from sources that are not fully representative of the global population.
   * Example: AI-based facial recognition performing poorly on darker skin tones due to dataset imbalances.
4. **Automation Bias**
   * Users may over-rely on AI-generated responses, assuming they are always accurate.
   * Example: AI-generated medical advice being taken at face value without consulting a doctor.
5. **Socioeconomic Bias**
   * AI may favor wealthier demographics due to skewed data representation.
   * Example: Loan approval models rejecting lower-income applicants based on historical trends.
6. **Language & Cultural Bias**
   * AI models may struggle with dialects, regional slang, or minority languages.
   * Example: AI translation tools failing to accurately translate less widely spoken languages.