

Understanding & Exploring Data Bias

A list of potential biases found in AI-generated responses, including an example based on left-handed people:

Majority Bias – AI models tend to favor majority perspectives. Example: When asked about a left-handed person, the response might focus on how they are "different" rather than treating left-handedness as neutral.

Stereotype Reinforcement – AI might unintentionally reinforce societal stereotypes. Example: Describing left-handed people as more creative without scientific backing.

Cultural Bias – AI models are trained on data that may prioritize Western perspectives over global viewpoints. Example: Discussions of beauty, education, or success often align with Western ideals.

Gender Bias – AI-generated content may reflect gender stereotypes. Example: Assigning leadership traits to men and caregiving traits to women.

Political Bias – Responses may lean toward dominant ideologies in the training data. Example: Generating text that favors democratic or liberal viewpoints over conservative ones.

Historical Bias – AI might inherit outdated or discriminatory views from historical texts. Example: Recommending career roles based on traditional gender norms.

Data Imbalance Bias – Underrepresented groups may receive less accurate or detailed responses. Example: AI might generate less nuanced content about minority cultures or LGBTQ+ identities.

Bias type	description	example
Handedness bias	Assumes right handedness as the default or majority norm	Descriptions of writing often assume a right handed person unless explicitly stated
Gender bias	Reinforces stereotypes about roles, interests, or behaviours based on gender.	AI-generated job descriptions may assume doctors are male and nurses are female.
Racial bias	May favour dominant racial groups in certain regions and underrepresent minorities.	AI-generated images or text may depict "American" as predominantly white.
Cultural bias	Prefers Western norms, holidays, and values over other cultures	AI-generated stories may default to Western traditions like Christmas but overlook Diwali or Lunar New Year.
Socio economic bias	Assumes certain lifestyles, incomes, or education levels as the norm.	AI-generated fitness or tech guides often assume a young audience and exclude elderly perspectives.