

Task - 5

Ethical concern: Bias in Data Science

One major ethical concern in data science is bias in algorithms, which can lead to unfair and discriminatory outcomes. Bias can come from imbalanced datasets, where certain groups are underrepresented, leading to inaccurate or skewed predictions. For example, facial recognition models trained primarily on lighter-skinned individuals have been shown to misidentify people with darker skin tones at significantly higher rates. Bias can also stem from human prejudices embedded in training data, reinforcing existing societal inequalities in areas like hiring, law enforcement, and lending. To address this issue, data scientists must implement fairness-aware algorithms regularly, audit models for bias, and ensure diverse and representative data collections. Ethical AI practice, including transparency, accountability, and explainability, are crucial to building trust and preventing harm in real-world applications.