

Assignment A1: Theoretical Essay-Based Assessment

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The Ethical Implications of Artificial Intelligence in Modern Society

Introduction

Artificial intelligence has become increasingly integrated into modern society, raising important ethical questions. This essay will examine three major ethical concerns related to AI: algorithmic bias, privacy issues, and job displacement.

Algorithmic Bias and Discrimination

One of the most significant ethical concerns with AI is algorithmic bias. When AI systems are trained on biased data, they learn and perpetuate those biases, often at scale. This is particularly problematic in high-stakes applications like hiring, lending, and criminal justice.

A notable example is Amazon's recruiting tool, which was found to discriminate against female candidates. The system was trained on historical hiring data that predominantly featured male hires, particularly in technical roles. As a result, the AI learned to favor male candidates and penalize resumes that indicated the applicant was female, such as those mentioning women's colleges or women's organizations.

Facial recognition technology has also demonstrated significant bias. Research by Joy Buolamwini and Timnit Gebru showed that commercial facial recognition systems had much higher error rates for darker-skinned individuals, particularly women, compared to lighter-skinned men. When these systems are used in law enforcement, such disparities can lead to wrongful arrests and disproportionate targeting of minority communities.

To address algorithmic bias, several approaches are needed. First, AI development teams should be diverse to bring multiple perspectives to the design process. Second, rigorous testing for bias should be mandatory before deployment in sensitive applications. Third, regulatory frameworks should require transparency about how AI systems make decisions and establish liability for discriminatory outcomes. Finally, technical solutions like fairness constraints in machine learning algorithms can help, though they cannot solve the problem alone.

Privacy and Surveillance

The second major ethical concern involves