FIN 377 - Investments

Group AI Assignment 4

Ethical Implications of AI in Finance

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This AI assignment must be done as a group, and all group members (unless there are unusual circumstances) will receive the same grade. The assignment must be uploaded to the D2L folder by the due date listed on the course schedule. Use the following title: "FIN 377 AI Ass. 4, Group X". Upload ONLY ONE assignment per group. All prompts (including the names of the AI models used) and (unedited) completions should be included in an appendix.

AI Assignment 4: Ethical Implications of AI in Finance

Assignment Overview

Artificial intelligence (AI) is rapidly transforming many industries, including finance. AI algorithms are being used for tasks such as credit scoring, fraud detection, investment management, and more. While AI has the potential to improve efficiency and accuracy in financial services, it also raises significant ethical concerns.

Topics to Address

1. Algorithmic Bias: Research and discuss the potential for AI algorithms used in finance to perpetuate or amplify biases, such as racial or gender bias in credit scoring and lending decisions. What are the sources of these biases and what can be done to mitigate them?
2. Data Privacy: Many AI applications in finance rely on large amounts of consumer financial data. Examine the privacy implications of collecting and using this data. What rights should consumers have over their financial data? What regulations exist or should exist to protect consumer privacy?

3. Transparency and Explainability: AI models can be complex "black boxes" where the reasoning behind their decisions is unclear. In the context of consequential financial decisions, is there an ethical obligation to make AI models transparent and explainable? How might this be achieved?
4. Displacement of Human Workers: Consider the potential for AI to automate and replace traditional roles in finance such as financial advisors, traders, and underwriters. What are the ethical implications of this technological unemployment? Do companies have an ethical obligation to reskill and support displaced workers?
5. Accountability for AI Decisions: When an AI system makes a decision that has negative consequences (e.g. wrongfully denying someone a loan), who is accountable? The company using the AI, the company that created the AI, the regulators? Discuss models for assigning accountability for AI decisions in finance.
6. Balancing Risks and Benefits: Weigh the potential societal risks of AI in finance (e.g. bias, job losses, privacy violations) against the potential benefits (e.g. increased efficiency, improved fraud detection, greater financial inclusion). Do you believe the benefits outweigh the risks? How can we ensure that the benefits are realized while mitigating the risks?

Sources and Citations

Your report should draw on at least six reputable sources, which should be properly cited in the body of the text and in a references section at the end of your paper. Appropriate sources include academic journals, reputable news outlets, and reports from think tanks or government agencies. AI models are especially prone to hallucinate academic citations, so make sure that anything you cite is real.