**LEVEL 0 SUMMARY**

* **Name of student:** GU Yangmei
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* **Source (e.g. scholars.google.com):** Google scholar
* **Paper title:** No AI risk if you don't use AI ? Think again
* **Keywords specific to the paper:** “AI technology model”, “management process models”

**Summary of the main contributions (Use text paragraphs, tables and if necessary, figures):**

This document presents AI risk management. The author makes several important points that any organization utilizing data and analytics should carefully consider, regardless of whether they are directly using AI technology. One of the first challenges they discuss is clearly defining what systems constitute AI, as the risks can come from automated decision-making systems more broadly. Regulations and frameworks often do not have a strict technology-based definition, instead focusing on the function and impacts of systems. This scoping issue makes determining applicability tricky. This article emphasizes looking at risk holistically across an organization's entire IT infrastructure and data ecosystem, rather than just at the component level. Risks tend to arise from dependencies between systems, uses of shared data, and impacts on stakeholders not just the specific techniques employed. Three dimensions that contribute to risk are highlighted: complexity, autonomy, and social impact. Even systems with low complexity can pose risks if they have high autonomy or effects. This ecosystem perspective is invaluable. Any organization processing data should map how it flows between internal systems, business units, and external partners. Important considerations include upstream and downstream effects, as well as interactions between systems in competitive settings. Accountabilities need to be clearly defined for data management, applications, and business uses. Third party relationships also warrant scrutiny. You make a fair point that defining what even constitutes AI can be ambiguous and evolving. I appreciate the paper urging organizations to take a broad view of any automated or data-driven systems that could meaningfully impact people. A comprehensive risk assessment approach seems wise. The author provides a nuanced view on data and historical effects. While past biases may be reflected in some training data, direct causality is complicated. Systems may overlook important implicit human information not captured as structured data. Predictions drawn from limited past patterns risk overgeneralizing. I can see why understanding a system's origins and inductive biases is so important. Failure to critically examine assumptions baked into models or rulesets could easily replicate or exacerbate real-world harms. Your comments about the limits of data as a full proxy for past realities or current lived experiences seem spot on. An underappreciated point made is that AI may sometimes help mitigate existing risks, such as by aiding fraud detection or anomalous pattern identification. However, these use cases still require safeguards to prevent new issues from emerging. Overall, it's evident this paper advocates a careful, multidisciplinary approach to progressing systems responsibly. The dimensions of complexity, autonomy and social impact provide a useful framework for assessing risk profiles. Any system relying on automation or data analytics would benefit from the holistic, process-oriented perspective advanced here. Doing risk assessments right clearly requires cross-functional collaboration and ongoing reevaluation.

* **AI model used (e.g. Neural network, etc.)**

This document does not explicitly discuss any specific AI “models”. However, it talks broadly about some of the social impacts that can arise from the use of AI and data-driven technologies: Discrimination or unfair treatment. Several of the news headlines mentioned discuss issues like algorithms used by companies like Deliveroo or criminal risk assessment software being accused of discrimination against certain groups. Loss of transparency and explain ability; as AI systems become more complex and "black-box", it can be difficult for humans to understand the reasons for certain decisions or predictions. This impacts things like accountability. Increased autonomy; as AI and automation reduces human oversight in decision-making processes, there is a risk of serious impacts if systems go wrong or act in unexpected ways without humans able to intervene effectively. New risks from new data sources; tapping into new big data sources like data traces could introduce new risks if predictive patterns don't generalize well or important context is missed. This could impact things like predictions about individuals. So, while it doesn't reference specific AI “models”, the document is discussing some of the broader social risks that can arise as AI systems and data-driven decision making are used in ways that have significant impact on individuals, groups or society through a lack of transparency, unfair outcomes, or unexpected autonomous behavior. The focus is on understanding and mitigating these risks holistically rather than focusing only on the AI technologies themselves.

* **Introduce the AI models**

The document discusses two key dimensions of AI: autonomy and complexity.

1. Autonomy: This dimension refers to the degree of independence and decision-making capability of an AI system. If an automated system functions without effective oversight of human operators, it is considered autonomous. This dimension of AI risk arises when human operators are unable to perform the function of the system, either because they cannot come to the same output based on the available input data, or because they cannot do so within a reasonable time frame.
2. Complexity: This dimension deals with how easy it is to simulate the behavior of an AI system in our minds, on the level of abstraction we care about. The document explains that the behavior of AI technology is often difficult to predict or simulate, leading to a lack of transparency and explain ability. This complexity problem becomes apparent when AI systems make mistakes that are hard to explain or even hard to notice.

These dimensions are important to consider when assessing the risks associated with AI technology and its impact on society.

* **How do they contribute the idea proposed by the paper?**

The document does not specifically delve into the details of AI models or their direct contributions to the proposed ideas in the paper. The focus of the paper is more on the broader implications and considerations related to AI risk management, compliance requirements, and the three dimensions of AI risk (autonomy, complexity, and social impact).

* **Supported by a software application? (If yes, provide more details)**

The context seems not supported by a software application.