Critically evaluate the impact of advanced algorithms in developing new capabilities for businesses, assess the impact on society, and identify future trends.

Advanced Research LO2

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# Introduction

Algorithm Name: Meta LLaMA (Kloda, 2025)

Description:

In my project we’re using LLaMa 3.2 to power a personalized movie recommendation algorithm called Meta lLLaMa. The algorithm intelligently filters through a dataset of movies, considering things like genre, actors, keywords, and user interactions. This ensures that every tailored movie aligns with the user's interests.  
The impact of using LLaMA in my project is significant. It improves its recommendations based on users interaction with the system - by adding or removing them from favourite movies. The algorithm learns from this data, enhancing its predictive accuracy and continuously improving the recommendation experience.

# Business Context

Pretrained AI models in recommendation systems enable users to keep engaged while optimizing content delivery. However, they can manipulate emotions, leading to binge-watching and content addiction, which raises ethical concerns. Traditional media, creative industries, and small businesses face disruption as AI-powered recommendations favour mainstream content and automate creative processes.

While LLaMa enhance user engagement and drive business revenue, they also present challenges. Businesses must balance user convenience with ethical concerns related to privacy, data security, and emotional manipulation.

# Societal Context

Our algorithm can offer enhanced convenience and personalized experiences but raise significant privacy concerns, as they rely on extensive user data collection, which must comply with regulations like General Data Protection Regulation. The manipulation of user behaviour, such as content addiction, can lead to negative impacts on mental health and well-being.

# Future Trends

The future of our project using LLaMa 3.2 will focus on even deeper personalization, where the system learns from nuanced user behaviours like viewing time and mood to make more tailored recommendations. As the algorithm adapts in real-time, it will improve its predictive accuracy, becoming increasingly efficient at anticipating user preferences. Additionally, integrating cross-platform data and enhancing AI explainability will make the recommendation process more transparent and engaging for users.

# Conclusion

Through this project, I have critically evaluated the impact of advanced algorithms in developing new capabilities for businesses, assess the impact on society, and identify future trends. I came to conclusion that large language models significantly enhance user satisfaction. However, it also raises important ethical concerns, especially around data privacy. As these technologies continue to evolve to Artificial General Intelligence (AGI), these concerns become even more critical. This makes it essential for businesses must balance between ethical responsibilities and transformative change.

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# References

Kloda, J. ed., (n.d.). [online] Bitbucket. Available at: https://bitbucket.org/JuliaKloda/movie\_recommendation\_system/src/main/server/faiss/ [Accessed 14 Mar. 2025].

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