Unit 8: Initial Post

AI as a Tool, Not a Substitute

For many of us, the rise of large language models like GPT-3 has opened new possibilities for using AI across different domains. As Hutson (2021) notes, these models can generate fluent, human-like text for tasks ranging from summarizing legal documents to writing poetry. This makes them appealing for both administrative functions and creative work. However, Hutson also warns that such systems remain “a mouth without a brain,” able to produce text without real understanding, which brings significant risks when their outputs are not carefully checked.

In my role in the aviation maintenance exam department, I have seen these risks first-hand. AI tools were introduced to generate large numbers of summative exam questions, promising to save time and reduce dependence on Subject Matter Experts (SMEs). Initially, the results looked promising, but when these questions were deployed, students quickly began to report issues. Upon review, SMEs found references to non-existent figures, fabricated data, and inconsistent question levels. This was especially problematic for our students, who are not native English speakers, as language complexity must be carefully calibrated. What was intended to reduce SME workload ended up requiring extensive review and rewriting, resulting in a glut of mediocre questions rather than a smaller set of high-quality ones.

This experience reflects broader academic concerns. Bender et al. (2021) argue that language models reproduce patterns without true comprehension, while Carlini et al. (2021) show that such models can expose unreliable or sensitive data. These risks highlight the fact that AI isn’t ready to replace the human element, far from it. It remains a tool to be utalized by humans, not replace them especially in a high-stakes field such as aviation.

References:

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Carlini, N. et al. (2021) 'Extracting Training Data from Large Language Models', *USENIX Security Symposium*, pp. 2633–2650.

Hutson, M. (2021) 'Robo-writers: the rise and risks of language-generating AI', *Nature*, 591(7848), pp. 22–25.