Generative AI and research – a research user's perspective on the productivity value-add

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Generative AI has entered research practice faster than our habits for using it well. Striking a balance between skepticism and enthusiasm for how it can transform our working lives is challenging.

I am not an expert in AI, but I have been using it to great effect in my research, from simple queries (ChatGPT-style), to more complex queries (gene *Nkx3-1* regulation), to assisting with drafting and evaluating our manuscripts, to writing code, installing software and running code.

AI tools, and in particular Claude-Code in a VS Studio environment, provide a user-friendly gateway between the desktop and the Gadi high-performance computing facility. All that power is brought to your desktop. There, I and others have been working on AI assisted development and orchestration of a genome assembly and annotation workflow.

These are examples of applications that greatly boost productivity – what once took weeks, takes hours. Hopefully I can share some of my enthusiasm for using AI in research as well as provide sage advice on how to wield these new tools with strength to achieve validated, reproducible and defensible outcomes. I will leave plenty of time for discussion.