An academic's guide to artificial intelligence tools and academic integrity

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1. What is generative artificial intelligence and what does it encompass?

Recent moves toward AI in higher education have occasioned the University of Divinity to create guidelines for the ethical use of these tools in coursework and research. This involves all the areas of academic integrity with a specific focus on the generative power of AI tools. Artificial intelligence (AI) tools simply give advice for a particular course of action. We use AI all the time, such as in our phones, spell checks and web searches. However, a Generative Pretrained Transformer (GPT) is a form of artificial intelligence that continually takes in information and stores it. Generative AI 'scrapes' the contents of the world of data and builds a product from this limited dataset. Large Language Models (LLMs) are trained with massive amounts of data to accurately predict what word comes next in a sentence. Increasing the amount of data increases the ability of the language models to do more. Generative AI uses patterns and structures which can store massive amounts of data, but without the complexities of the human brain. Specific AI tools currently popular are: ChatGPT, Bard (Google), Ellie AI (for writing emails), Murf AI (voiceover), Heyday (research), WordTune Reader (summariser) and many more. A Google chatbot called LaMDA is a hybrid search engine and conversation partner, set to replace textbased internet searches. All these advances mean that artificial intelligence, that is generative, is no longer a static source of retrieving information, but a tool to complete tasks.

2. Definitions

Generative – Progressive machine learning of underlying patterns and structures in a large dataset and using that to create something new.

Pretrained – A transformer model that has been pre-trained on a large dataset, then fine-tuned for a specific task, unsupervised.

Transformer – A neural network architecture, used for natural language processing (NLP) tasks. This processes data such as text or speech, capturing long term dependencies and contexts in the large data set.

Black box effect – The phenomenon of the user not understanding how a machine learning model arrives at its predictions or decisions. The machine does not use a human method to identify and weigh patterns and structures.

3. What is the University of Divinity Framework on navigating the impact of generative AI?

a) Copyright

In the light of AI developments, the <u>Copyright Council of Australia</u> is currently examining the Copyright Act 1968 in relation to authorship. An author is defined as 'a qualified person' using 'independent intellectual effort' 'directing or fashioning the material form of the work' (Section 32). This assumes that authors are humans or corporate humans (referred to as 'makers').¹ The question for the University is not whether an AI tool is an author, but 'how to evaluate the

¹ Professor Patrick Fair (Deakin University), <u>Copyright Council of Australia</u> Webinar and Fact Sheet, May 2023: "Artificial Intelligence and Copyright."

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authorial claims of the humans involved in either preparing or using the machines that "create"... (between author and amanuensis, between author and tool, and between author and coauthor).'² Key terms are the differences between 'generated' (created using prompts alone without input besides a prompt or command) or 'enhanced' (inserting the student's or candidate's original creation to edit or revise).

- Until any further Australian court decision on this, the University will continue to only use learning resources (resulting in citation) that are generated by human or corporate human authors and permit the electronic storage of these.
- Al generated text is not to be distributed as expert scholarship, original art or music, or as scholarly research material to students, as it is not human authored or peer reviewed.
- Al generated texts can be used to create learning experiences and activities, plain English versions of class summaries for discussion, or lesson plans.

b) Citation

Citations are to be gathered from human authored resources, peer reviewed and published, or, as allowed for Minor Theses or Higher Degrees by Research, human or animal research data gathered directly by a student or candidate. The University Style Guide uses the Chicago Manual of Style which describes citation from AI tools, however this is not to be used due to our Australian context as in a) above.

- Students or candidates are not to copy verbatim AI generated text or images/sound into assessments, even if quotation and citation is used.
- Furthermore, prompts that produce AI content cannot be used themselves in footnotes or bibliographies.
- If permitted in the unit or thesis, AI Prompts can be used to research or check veracity of data. These must be shared with a narrative of their use in the title page of the assessment piece.

c) Assessment design

- The University strongly encourages the incorporation of generative AI tool skills and appropriate usage into assessment linked to the Graduate Attributes and Course Outcomes.
- Academic staff are strongly encouraged to teach students to critically evaluate and appropriately use AI tools in some formative assessment tasks.
- The University encourages assessment design that requires students to do more than compare and contrast various positions, but also to give reasons for an overall position.
- Invigilated exams are not required to use third party examination platforms,³ but are encouraged to be designed to require local level information from class activities, unique local case studies, or to use the format of oral presentations or viva style defences.

² See Jane C. Ginsburg and Luke Ali Budiardjo, "Authors and Machines," *Berkeley Technology Law Journal* 34, no. 2 (2019): 343-448. DOI: <u>https://doi-org.divinity.idm.oclc.org/10.15779/Z38SF2MC24</u>

³ E.g. Examity; IRIS Invigilation; Pearson VUE; Proctorio; Proctortrack; ProctorU

- The University strongly encourages incorporating formalised self-assessment and evaluative judgement in the assessment process, including requesting students to analyse their own work through editing or matching software. Authentic personalised assessment is also encouraged.
- Topics for assessment and criteria referring to local or recent content are strongly encouraged.

d) Student and staff skills development

- Al tools can be used to search for: most cited published research; building staff or student applications for bursaries, grants, or promotions using unique information.
- Using AI tools to create research topics is strongly discouraged.
- For English language and expression help, the University allows the use of 'enhancement' in grammar and language editing from AI tools, in assessment submissions. The requirement is that the student or candidate also submit the original version along with the enhanced version.

e) Grading and quality assurance

- Activity on the Learning Management System, including grading, generative AI and text matching software reports, are to be consulted for each assessment piece that is over 750 words. Guidance on probability, reliability, and use of the reports for all assessment is at the discretion of the College, School or Academic Integrity Authorised Officer delegated by the College or School. The provision of education for students in the use of these reports to assist with academic integrity, when necessary, is strongly encouraged. This should include reference to the <u>Academic Integrity Policy</u>.
- The final grade of an assessment task will be always determined by a human.
- If using grammar and spelling enhancement, the ideal is for the original written piece to be submitted along with the enhanced piece of assessment. This is for the grader to check that the student or candidate has understood the semantic changes that may occur when correcting grammar.
- College and School staff are strongly encouraged to incorporate skills and awareness of generative AI tools via reflection in, moderation, peer review of assessment tasks and periodic redesign of assessment.

f) Human research and grants

• The University strongly discourages the use of artificial intelligence for biometric measurements, including detecting emotion, for human and animal research.⁴

⁴ European Commission, protocol on ethical use of Artificial Intelligence, June 2023. <u>https://www.europarl.europa.eu/news/en/headlines/society/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence</u>

• Staff must not input any part of a grant application (internal or external) or peer review grant material into a generative artificial intelligence tool to make the application.⁵

4. What are the guidelines for use of generative AI tools?

a) Appropriate uses of AI

- Formulate emails and replies.
- Contacting prospective students, onboarding, and alumni communication.
- Simplify complex topics for research.
- Brainstorm ideas.
- Compose social media posts.
- Suggest analogies for current research.
- Enhance your grammar, language expression or write in plain English (using your own original writing) through generative AI (rather than spell checks in word processing programs or phones).
- Translate text into a variety of languages.
- Create transcripts for research.
- Look for resources and ideas around a topic.
- Look up topics which are common knowledge.

b) Inappropriate uses of AI

- Creating prompts that ask a generative AI tool to write, draw or create whole or parts of assessment material from scratch, and copying it into assessment submissions as your own work.
- Solving tasks in examination questions from scratch, and copying it into assessment submissions as your own work.
- Asking for original ideas to answer essay topics and copying the text verbatim into assessment submissions.
- Asking for a full paraphrasing of part of a peer reviewed published resource and copying it into assessment submissions as your own work.
- Looking up specialised knowledge and claiming the search results as your own work in assessment submissions.
- <u>Do not rely on AI tool models</u> to conduct grading of assessment or College meetings and interview processes.

⁵ See <u>https://www.nhmrc.gov.au/about-us/resources/policy-use-generative-artificial-intelligence</u> and <u>https://www.arc.gov.au/about-arc/program-policies/policy-use-generative-artificial-intelligence-arcs-grant-programs</u>

- Using AI tools for formative feedback should be used with caution.
- Placing private information stored by the University about staff or students into generative AI tools.

Document history

Version #	Date	Key changes
0.1	16 June 2023	Made available as beta version for consultation with the Dean of Academic Programs, the Dean of the School of Graduate Research and College Academic Deans.
0.2	11 July 2023	Addition of cautions for grammar tools, research and peer review/grant applications.
1.0	28 July 2023	Approved by Academic Board.