Honours in the School of Mathematics and Statistics

Information Session 25/9/2025

The elephant in the room

- We are now in the year 3 AI (first information session I'm leading since ChatGPT 3.5 was introduced in Nov 2022)

- 2019 NYTimes headline: "A Breakthrough for A.I. Technology: Passing an 8th-Grade Science Test"

- Me: "How far behind do you think 12th-grade… undergrad tests are?

- Doing honours might keep you off welfare for a few more years before AI catches up with all of us"

- Little did I know that just six years later, I'd be wondering about how long before we all live on universal income, what should we teach our students, and how can we verify their thesis wasn't written by AI?

- Disclosure: starting next year the university will introduce a hurdle oral exam

AI and our honours program

- We live through the golden age of human productivity

- GenAI has given each of us the unprecedented ability to instantly tackle complex problems using the most suitable techniques from the entire human knowledge base

- But we still need to understand what it's telling us—and know what questions to ask

- Our honours units introduce crucial mathematical and statistical concepts not covered in undergrad

  - Internalizing these concepts is instrumental to evaluating and maximizing the utility you derive from GenAI

- Supervised cutting-edge research will be a new and rewarding experience (WARNING: frustration is a known side effect)

- By judiciously using AI to augment (not replace) your research, you'll develop both research skills and mastery of this powerful technology (WARNING: some of my colleagues might find the first part highly controversial)