Unit 12: Future of Big Data

Overview

In this final unit, we explored where big data analytics is heading and the kinds of technologies shaping its future. We also broke down the basics of **machine learning**—what it is, how it works, and the many ways it can be applied across different sectors.

I also reflected on how these technologies could be used in real organisations, the kind of value they can bring, and the impact they could have on operations and decision-making.

Key Takeaways

- I gained a clearer understanding of the **emerging trends in database development** and how those trends are changing the way data is stored, accessed, and used.
- I built a foundational understanding of **machine learning**, including how it's used for pattern recognition, prediction, and automation.
- Most importantly, I was able to see how machine learning could fit into an actual organisation—whether it's to improve efficiency, generate insights, or build smarter systems.

e-Portfolio Submission Focus

This week is all about submitting our final individual e-portfolio for the module. That includes:

- Documenting the work I've done across all units—especially discussion posts, technical tasks, and notes on any challenges or opportunities I faced while working with data (e.g., data wrangling).
- Including artefacts like team meeting notes, tutor or peer feedback, and anything that shows my learning process and engagement.
- Evaluating the **final project in Unit 11** against the original **project proposal in Unit 6**—what stayed the same, what changed, and why.
- Reflecting on how this entire module has helped shape my skills, confidence, and understanding—both professionally and personally.

Reflection Section

This section pulls together key reflections I've made along the way. I'll include:

- What I've learned about **data extraction, cleaning, exploration, and modelling**.

- My specific contributions to team projects, especially the group work in Unit 6.
- A summary of how I've grown over the course of the module—what's changed in how I work, what I've become more confident in, and what I want to keep building on.

See the following GitHub link for the full report: GitHub-Reflection Section.pdf

Core Readings

Sardar, T. H. and Pandey, B.K. (2024) *Big Data Computing*. CRC Press

- Chapters 10 and 12.

Bhatnagar, A. and Gajjar, D. (2024) *Policy implications of artificial intelligence*.

Recommended Readings

Mott, M. (2021) *Deciphering Big Data Studies*.

Wibisono, O.et al. (no date) *The Use of Big Data Analytics and Artificial Intelligence in Central Banking*.

Harvard Business Review (2023) *Data Strategies That Provide Business Value*.

Strickland, E. (2024) *What Is Generative AI?*.