



## Building Your Own RAG Pipeline from Scratch!

By Taylor Ey

Retrieval-Augmented Generation (RAG) has become foundational for enhancing Large Language Models' accuracy and relevance by integrating external, domain-specific knowledge. While many LLM applications rely on RAG, this technique is not without its flaws and challenges.

In this QuantLunch, Taylor will walk us through the core mechanics of RAG, showing its common challenges – such as retrieving irrelevant data or failing to effectively integrate context – and exploring practical strategies for improvement. During this session we will build a RAG pipeline from scratch, covering key components like vector databases, selecting appropriate embedding models, retrieval techniques, and evaluation methods.

Together, with this knowledge, we will build a chatbot that actually works!

**Date:** Monday 11 August 2025  
**Time:** 12-1 pm AEST  
**Location:** Linkway, Level 4, School of Social and Political Sciences (BUILDING 191), Parkville  
**\*\* Software:** Come prepared and download Anaconda and Visual Studio in your laptop \*\*  
**How to join:** If you'd like to join, send an **RSVP** as soon as possible to either Irma ([irma.mooi@unimelb.edu.au](mailto:irma.mooi@unimelb.edu.au)) or Seraphine ([seraphine.maerz@unimelb.edu.au](mailto:seraphine.maerz@unimelb.edu.au)).

**Taylor Ey** is a Foundational Fellow at the Melbourne Institute of Applied Economic and Social Research. He is an AI-focused data scientist and researcher specialising in developing and implementing artificial intelligence solutions for complex challenges. With experience from the U.S. House to Australian research organisations, Taylor has developed and deployed AI models that transform large-scale datasets into actionable insights and is passionate about pioneering responsible AI applications that create meaningful social impact. He combines expertise in machine learning and advanced AI techniques with strong communication skills to translate technical concepts for stakeholders and drive AI-powered decision-making.



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