

Is AI

(Artificial Intelligence)

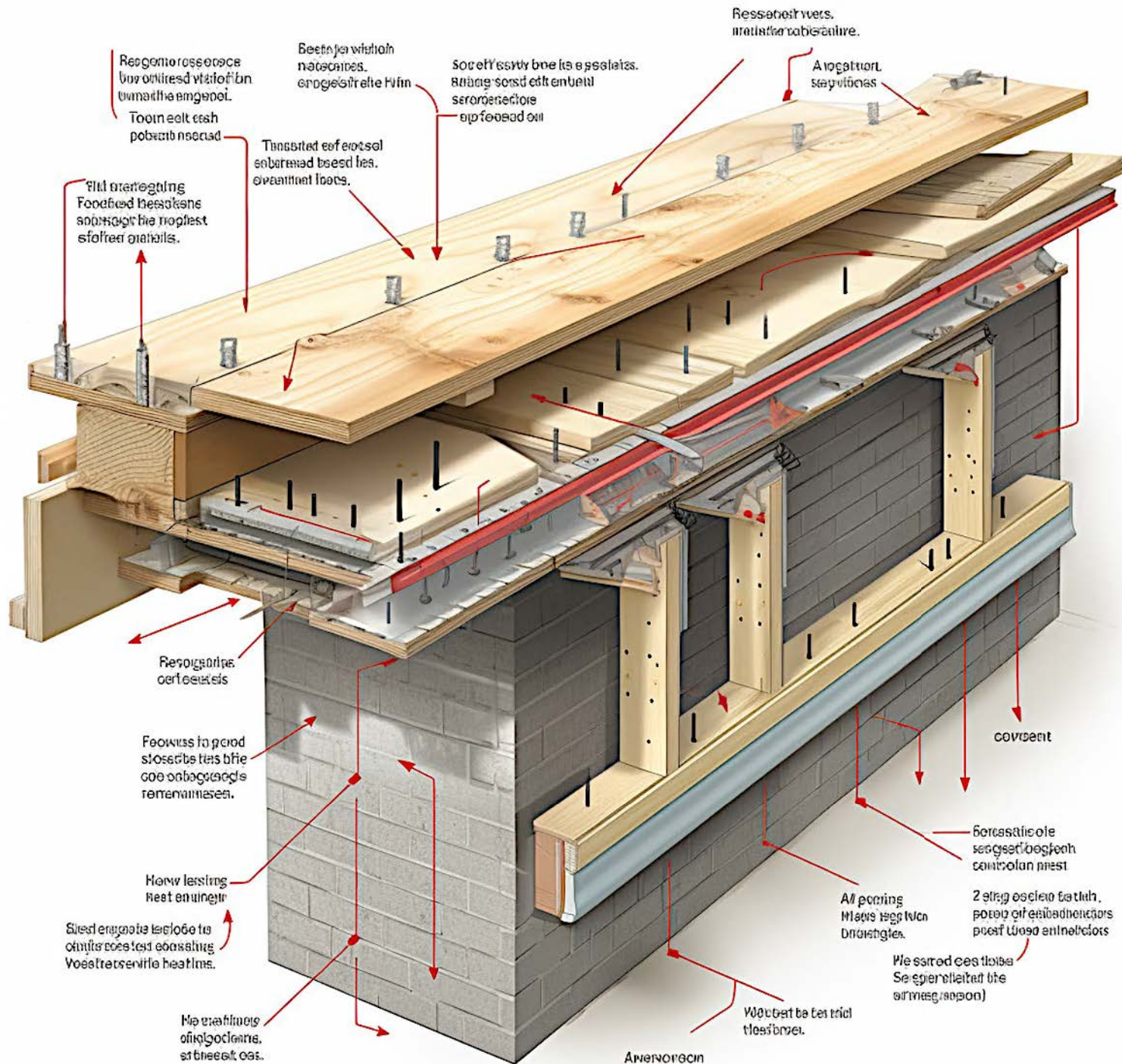
BS?

(Building Science)



UNIVERSITY OF
WATERLOO

Department of Civil and
Environmental Engineering
Architectural Engineering



Over to Dr Bob....



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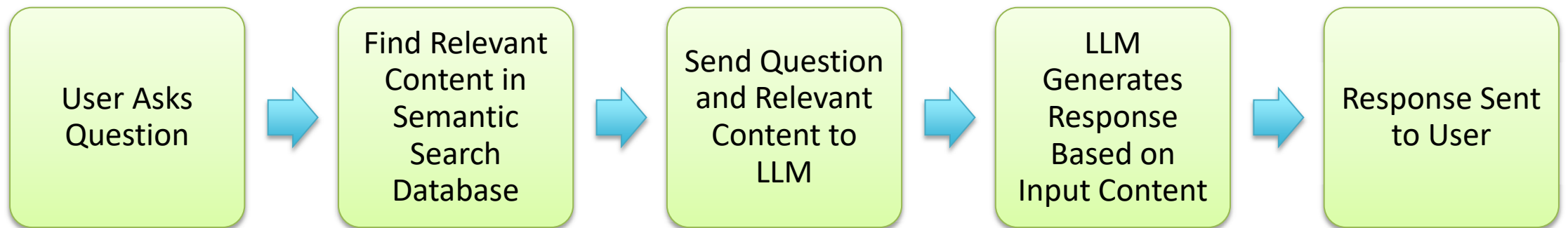
What are Generative AIs and Large Language Models ???



- Generative AI
 - Models that create new content – e.g., audio, images, text, or videos
- Large Language Model
 - Large AI model with billions of parameters
 - Trained on trillions of words on input
 - Works by “next word prediction” based on user input and previously generated text
 - Very clever version of predictive text algorithm (like on your smart phone keyboard)
- On its own, an LLM can produce text but has **no domain expertise**

How can you add domain expertise ???

- Retrieval-Augmented Generation (RAG) is a technique to provide domain expertise to a large language model
- For a given question, it searches a semantic database and finds relevant content
- The LLM answers the question with the relevant content given as context



Why BuildingScience.com ???

- Extensive and curated repository
 - Large set of high-quality, objective building science information
 - Clear and consistent point of view
- Opportunity to extend reach
 - Help mandate of promoting the design and construction of buildings that are healthier, less energy-consuming, and more durable and economical





LIVE DEMO

<https://bscassistant.ai>