Using Everything of Thoughts to Intelligently Generate Knowledge for Disaster Knowledge Management

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Abstract:

In the past few decades, climate change has led to rising temperatures, increased frequency and intensity of heavy rains or droughts, and increased people's water demand, causing serious damage to natural resources, personnel and property. These calamities caused tragic loss of life, severe property damage, and a decline in regional prosperity. There is a strong need to explicitly generate prior or existing problem-solving knowledge in a complex sustainable knowledge management.

The main purposes of this study are twofold. First, from the prompt engineering standpoint, it systemically investigated the disaster preparedness, using IDEF0, along with the "more manageable language" of the direction of decision-making by breaking down complex problems, the "thought" of disasters, using Large Language Model (LLMs). Given the IDEF0 expert model and Everything of Thought (XOT) model, finally, it integrated IDEF0and XOT for model setting and data analysis, in terms of My GPT, to ensure the accuracy and comprehensiveness of the disaster preparedness.

Keywords:

Everything of Thoughts (XoT), IDEF0S, Disaster Knowledge Management.