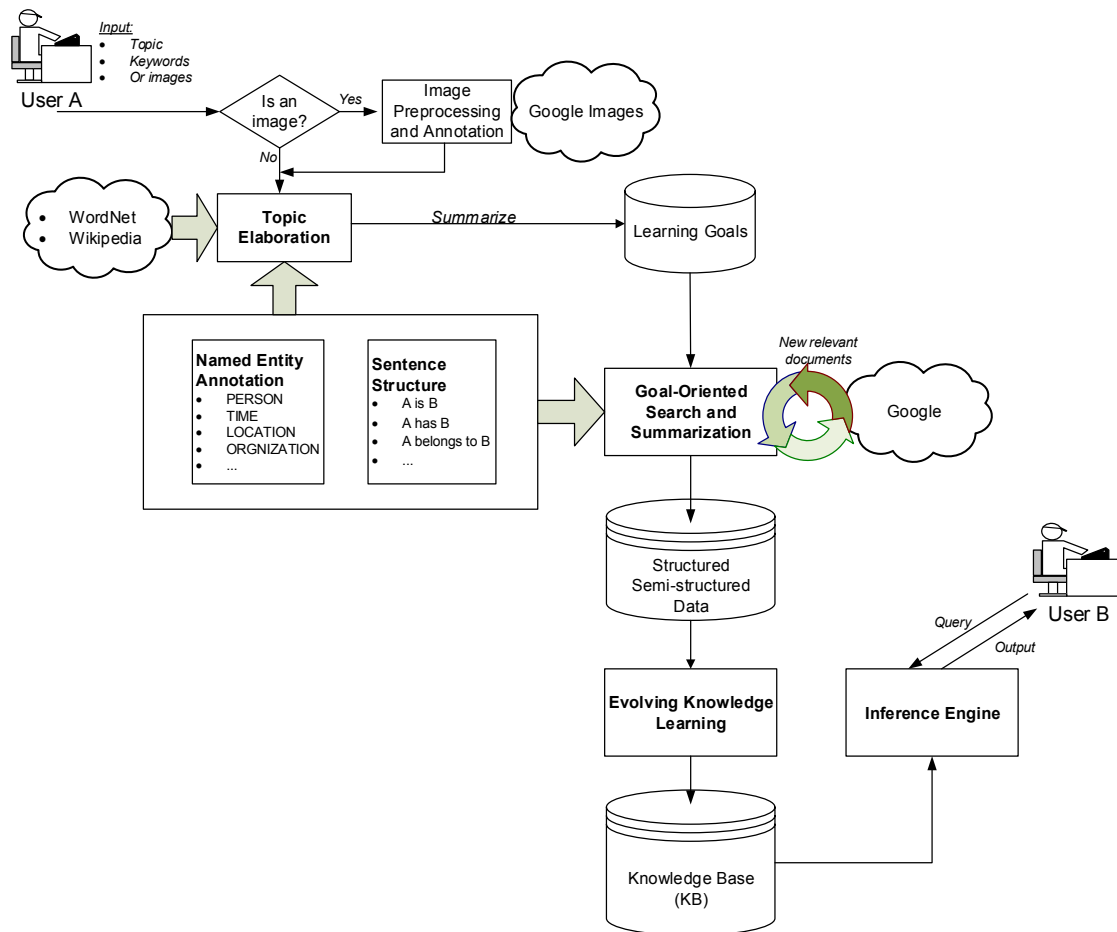


# Automatic Knowledge Extraction from Unstructured Open Sources (AKEOS) for Autonomous System

To build a human-like autonomous system that is capable of reasoning and decision making, it is imperative to encode knowledge into the system. Knowledge exists in various sources, but mostly in text and images, which are unstructured and are not machine understandable. This research aims to build an automatic knowledge extraction system that is able to extract knowledge from unstructured sources and then encode the knowledge extracted into machine understandable and usable form. The following diagram shows the architecture of the AKEOS system:



For a query, such as “Tohoku earthquake”, the system will first search the web to find relevant documents, identify informative sentences, and then extract knowledge and encode the extracted knowledge into a graph. Based on the knowledge graph, advanced query and reasoning can be performed. The system will automatically generate the following knowledge graph which was based on this particular query:

