

Curriculum Architecture

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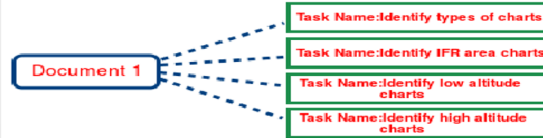
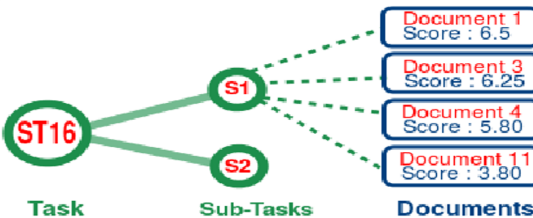
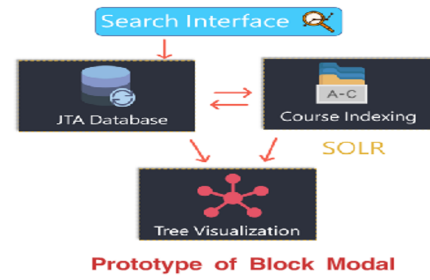
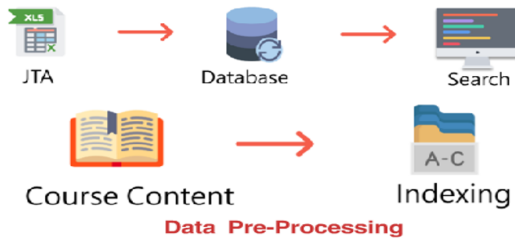
WHAT ?

There exist a large number of FAA training courses that provide trainings for different job tasks. Each job task may require the completion of several training courses, and each training course may provide support to several job tasks. Due to the large number of combinations of job tasks and training courses, it would be a tremendous effort trying to identify potential overlaps among topics covered by different courses for different job tasks.

GOALS:

The goal of this project is to apply tools of Information Retrieval (IR), Natural Language Processing (NLP), and Machine Learning (ML) to build a prototype system to facilitate the analysis of curriculum gaps.

HOW ?



Visualization of Task to Document Mapping

Document to Task Mapping

FAA CAP ANALYSIS

Relevant Documents for: low altitude

FAA SOLR INTERFACE

Relevant Documents for: low altitude

WHY

The system will allow users to search for what training courses are relevant to what job tasks, and what job tasks are covered by what training courses. The project will transform the existing training course contents and job tasks analysis into a repository searchable by Natural Language Processing (NLP) tools.

IMPACT

For the next 4 years of the COE, our project in this phase provides a foundation and a prototype of how to transform training course materials into a searchable repository by modern NLP tools. With the enhancement of AI tools, it will support the development of effective training systems in the digital era.