ESPRIT

PMBOK Recommendation System

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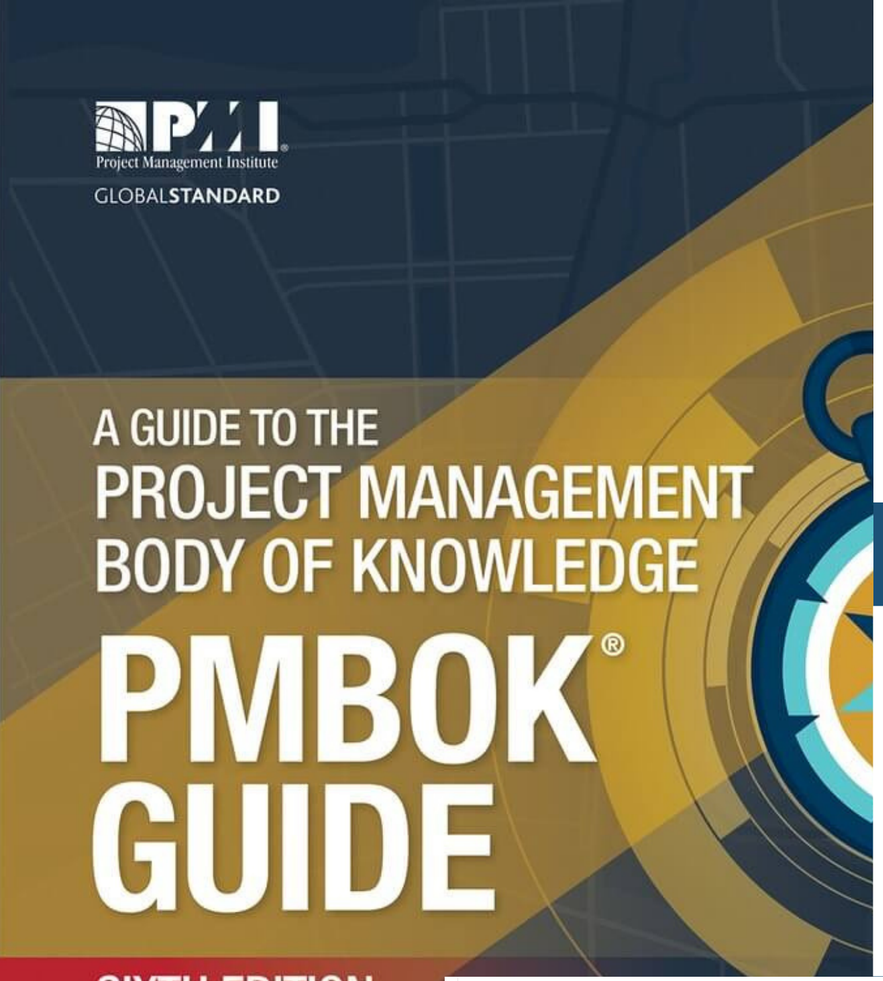
PLAN

- *PROJECT DESCRIPTION*
- *DATA COMPREHENSION*
- *VARIOUS STEPS*
- RECOMMENDATION SYSTEM VALIDATION
- *CONCLUSION AND PERSPECTIVES*

Project Description



Problematic

- Need for non-experts to have information on project management.
- No time to check 500 pages.
- A lot of informations in the same time.

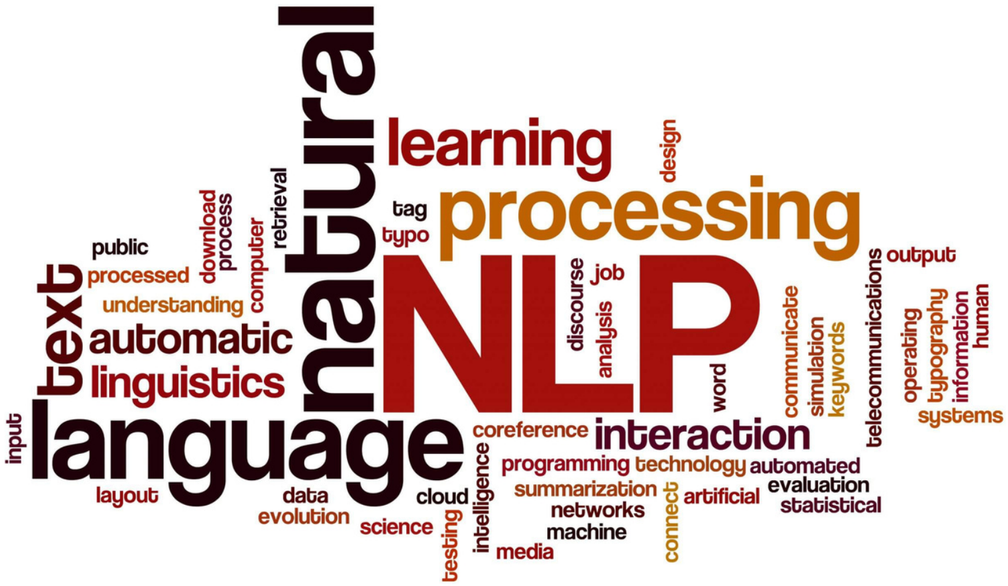
Our solution

PMBOK Recommendation System

SEARCHIN

- ✓ User friendly.
- ✓ Project management recommendation.
- ✓ *Simple to use for researches.*

Technologies and tools



Data comprehension

Main dataframe

	Process Name	Type	Contenu	Reference	Definition	Synonym	subject	Relation	object
0	PROJECT SCOPE MANAGEMENT		project scope management includes processes re...			[[project, projects], [scope, processes], [sco...	[project scope management , project , work , p...	[includes , ensure , includes , managing , con...	[processes , project , work , project , projec...
1	PLAN SCOPE MANAGEMENT		plan scope management process creating scope m...	depicted in Figure 5-2	Plan Scope Management is the process of creati...	[[plan, plans], [scope, process], [management,...	[plan , management process , product scope , p...	[creating , provides , performed predefined , ...	[scope management process , scope management p...
2	PLAN SCOPE MANAGEMENT INPUTS	has_input				[]	[]	[]	[]
3	PROJECT CHARTER		. the project charter documents project purpos...	Described in Section 4.1.3.1		[]	[project charter documents , highlevel project...	[intended ,]	[project purpose highlevel project description...
4	PROJECT MANAGEMENT PLAN		. project management plan components include l...	Described in Section 8.1.3.1		[[management, managed]]	[project management plan components , product ...	[managed , implemented , phases , passes ,]	[include , quality management plan , organizat...

Axillary dataframe

	Subject	Relation	Object
0	project scope management	includes	processes
0	project	ensure	project
0	work	includes	work
0	plan	managing	project
0	managementthe	concerned defining controlling	project scope
...	...	...	...
262	budget variance analysis	revisit	basis estimates
262	value analysis	reflect	cost efficiency project
262	actions	learned	register
262	cost variances	updated	techniques
262		maintaining	budget variance analysis

Dataframe of data_proprety

	Domain	Data_Property	Range
0	PROJECT CHARTER	Described in	Section 4.1.3.1
1	PROJECT MANAGEMENT PLAN	Described in	Section 8.1.3.1
2	PROJECT MANAGEMENT PLAN UPDATES	Described in	Section 8.1.3.1
3	EXPERT JUDGMENT	Described in	Section 4.1.2.1
4	PROJECT CHARTER	Described in	Section 4.1.3.1
...	...	...	...
121	DATA ANALYSIS	Described in	Section 7.2.2.6
122	WORK PERFORMANCE INFORMATION	Described in	Section 4.5.1.3
123	CHANGE REQUESTS	Described in	Section 4.3.3.4
124	PROJECT MANAGEMENT PLAN UPDATES	Described in	Section 7.3.3.1
125	PROJECT DOCUMENTS UPDATES	Described in	Section 11.2.3.1

Various steps

Different steps

STEP 1

the knowledge Extraction Pre-processing PMBOKS's Frameworks using NLP &ML

STEP 2

Modeling domain ontology

STEP 3

Semantic parsing

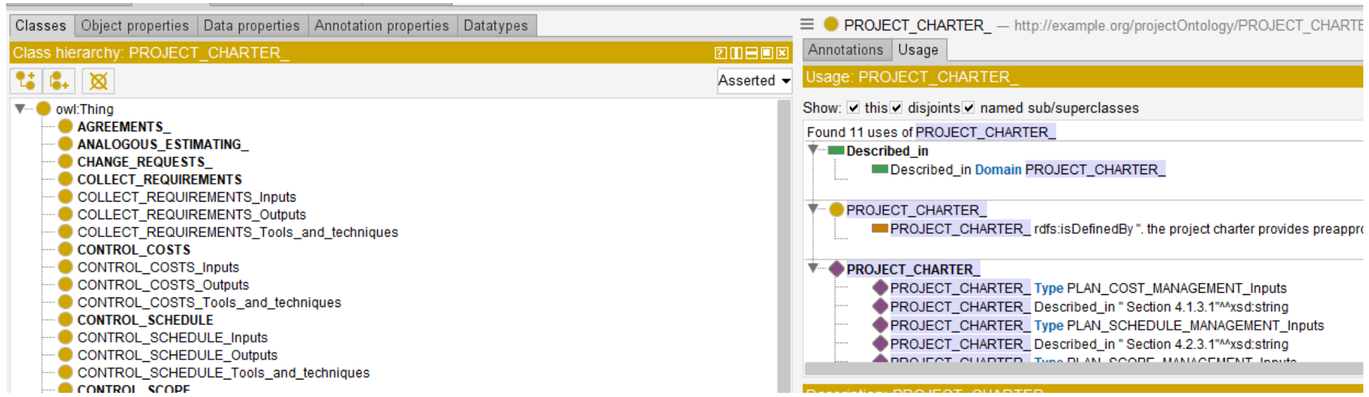
Phases

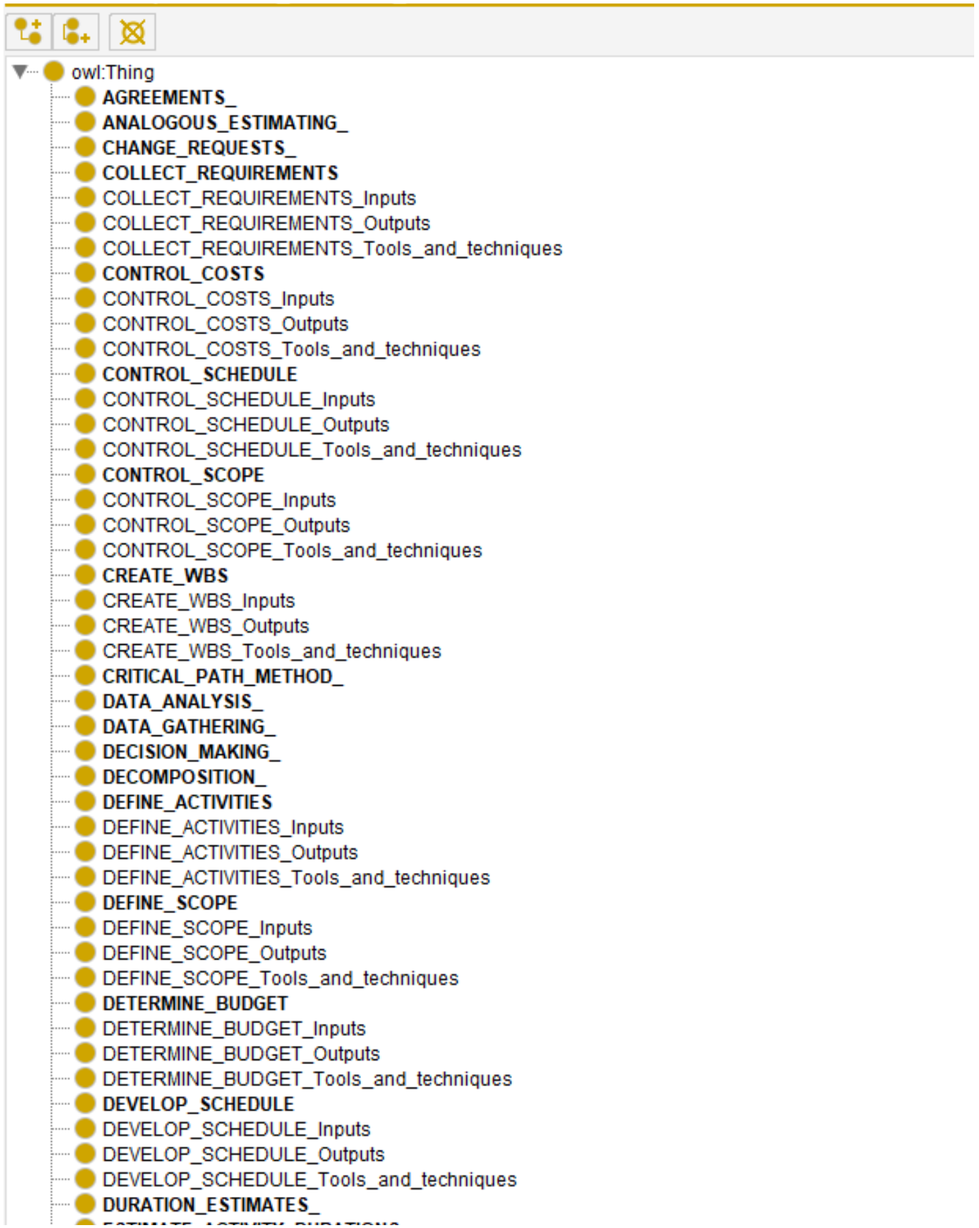
Phase 1: PreProcessing

- ✓ Data Extraction and cleaning
- ✓ NLP Methods:
  - Stop words removal
  - Tokenization
  - Part of Speech Tagging
  - Lemmatization
  - Spacy
  - Stemming
  - Synonyms

- ***Phase 2: OWL Generation***

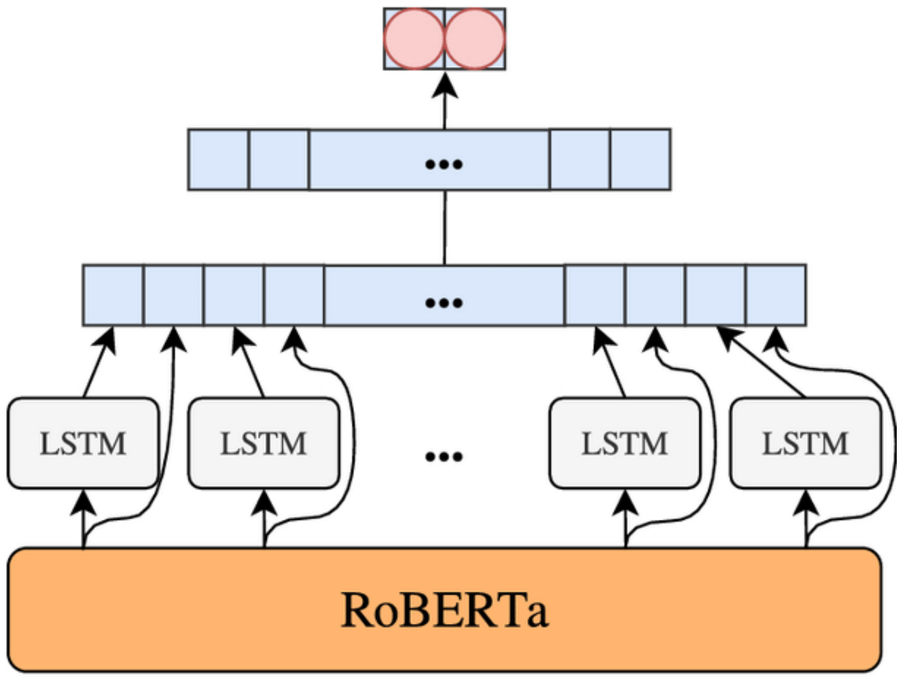
✓ RDFLib

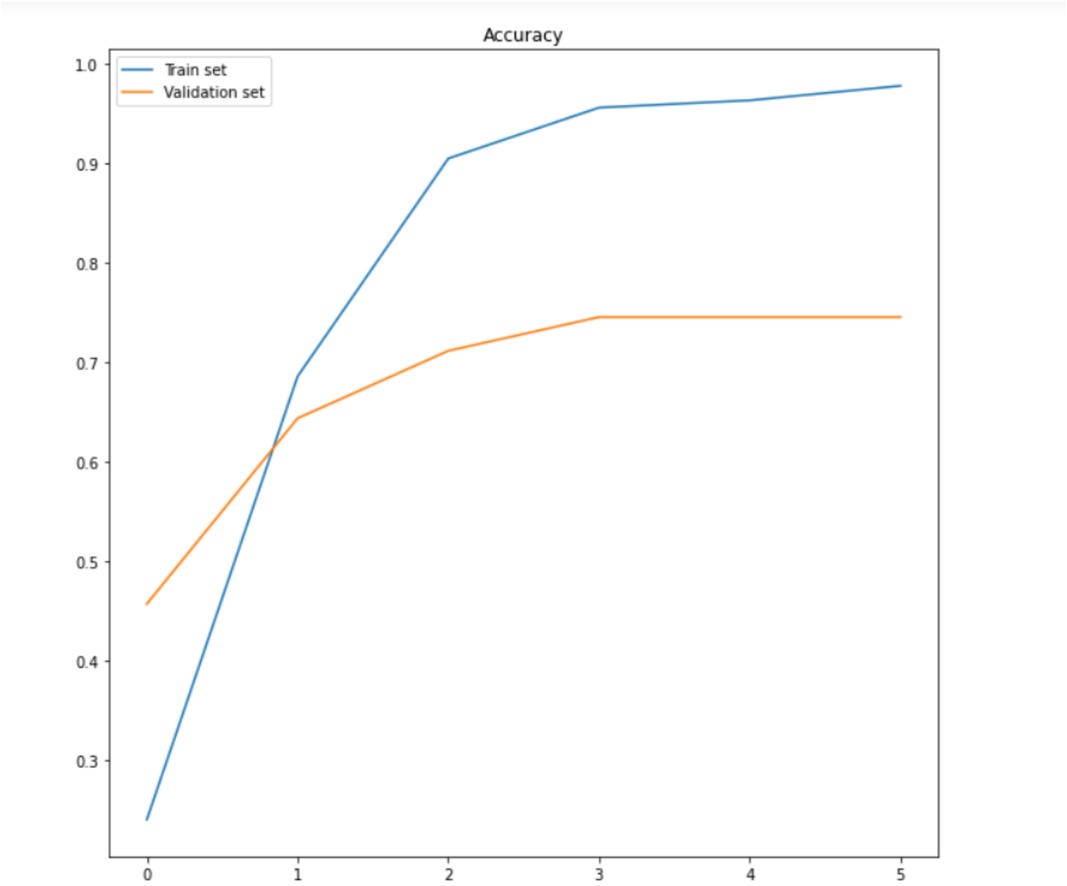




- ***Phase 3: Recommendation System***

✓ ROBERTA Model





- ***Phase 4: Deployment***

Recommendation system validation

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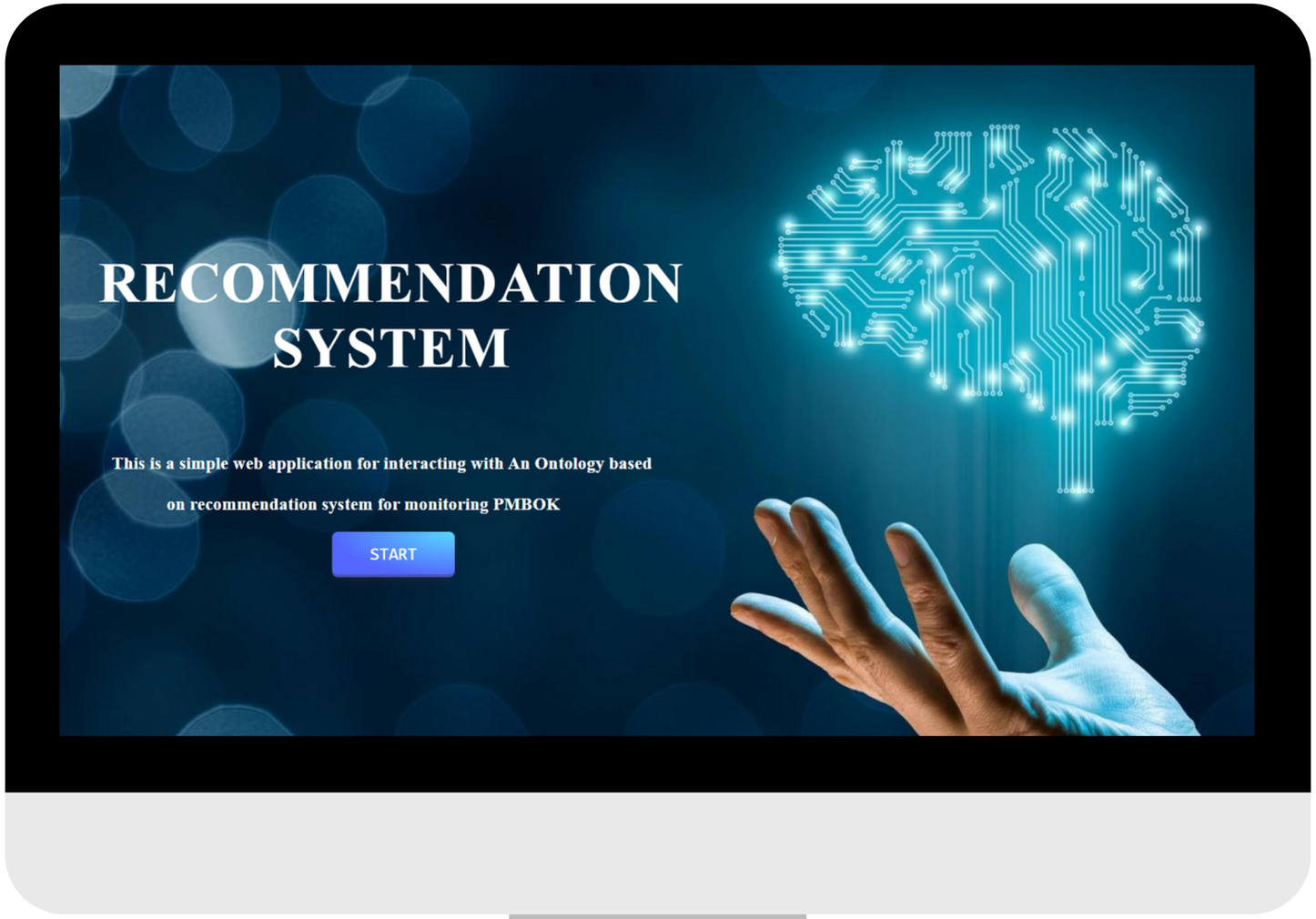
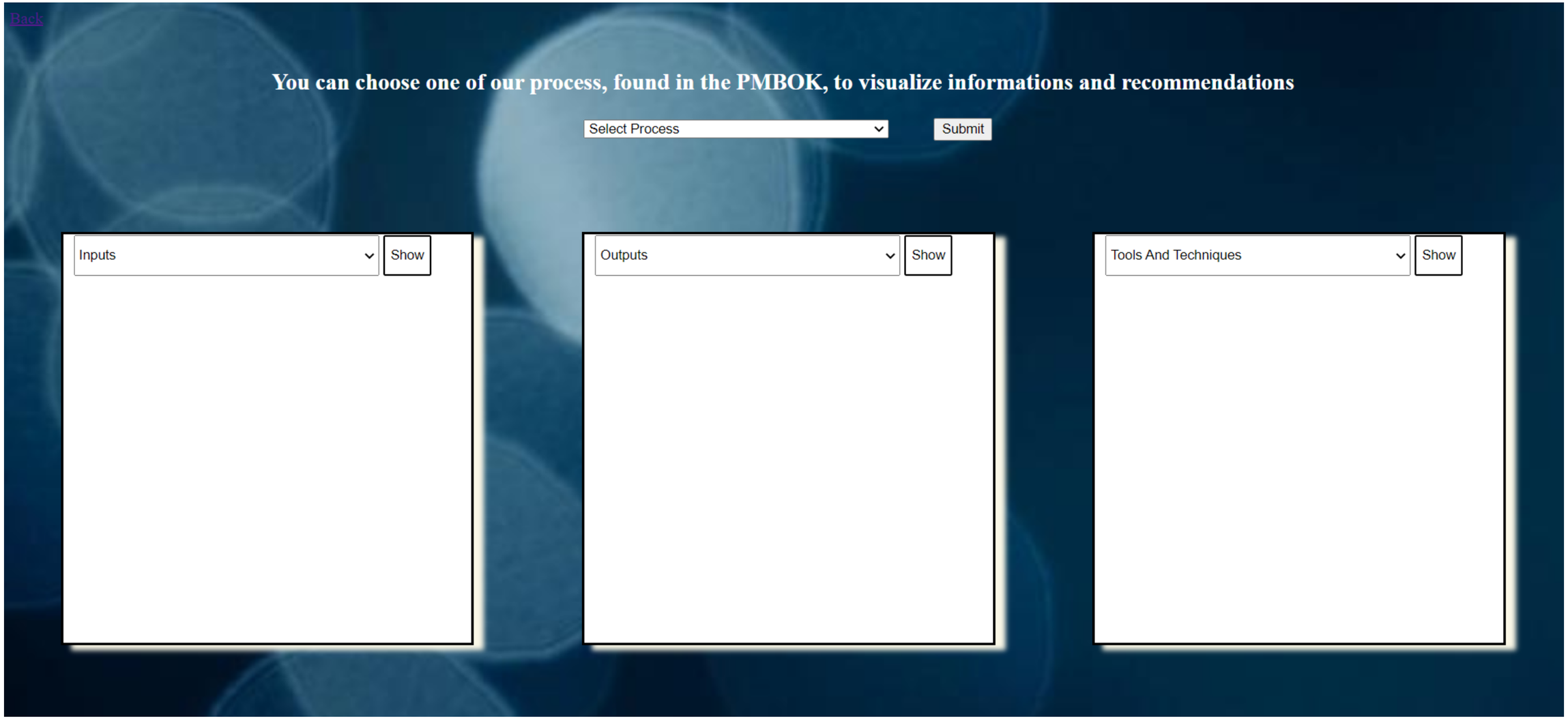
Visualisation




Back
You can choose one of our process, found in the PMBOK, to visualize informations and recommendations
Select Process
Submit
Inputs
Show
Outputs
Show
Tools And Techniques
Show

PMBOK SYSTEM RECOMMENDATION

SEARCHIN

This is a simple web application for interacting with An Ontology based on recommendation system for monitoring PMBOK

INTRODUCTION

The non-experts who are looking for more information on the subject of project management are led to read and spend a lot of time to discover the concepts of this field to facilitate their research.

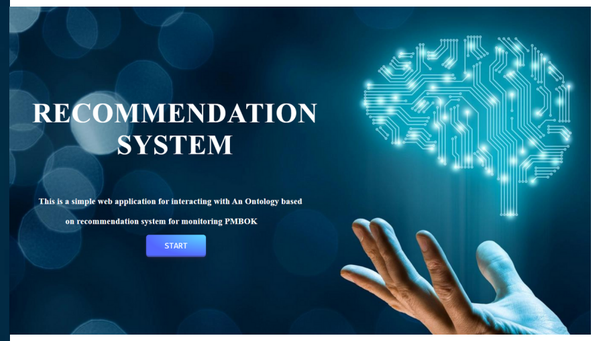
OBJECTIVE

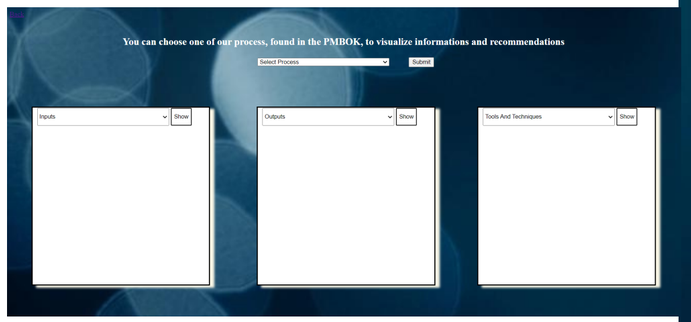
Our solution is to create a recommendation system that aims to guide the user in his exploration of the data so that he finds relevant information.

DATA COMPREHENSION

ProcessName: names of the processes evoked in the pmbok.
Content: used to extract the definitions and examine to extract subject/object/relation
Synonyms: give the synonyms of all the process names
Reference: extract the appropriate figures for the content

DATA VISUALIZATION

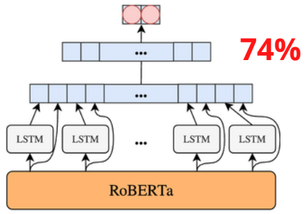




PRE-PROCESSING AND OWL GENERATION

Data cleaning: data extraction from PDF PMBOK basics with python methods and regular expressions
NLP Methods: to get better and more clean data we used Stop words removal / Tokenization/ Part of Speech Tagging/ Lemmatization/ Spacy/ Stemming/ Synonyms

RECOMMENDATION SYSTEM



CONCLUSION AND PERSPECTIVES

This project will develop to accommodate and facilitate the exploitation of more resources, it will present features such as instant translation to different languages desired by users

Project Management Institute

A Guide to Project Management Body of Knowlege

KN

Conclusion and perspectives

Perspectives

THANK YOU