KEPLER

Design and UI

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RECOMMENDATION ENGINE OBJECTIVE

Person Profile Data

Configuration

Product Data

Configuration

SAMPLE DATA SETS

- [TMDB 5000 Movie Dataset | Kaggle](#)

- [The Indian Movie Database | Kaggle](#)

- [TED Talks | Kaggle](#)

OBJECT MODEL

App

1-* Session

ConfigMgr

Audit

1-* Message

1-* DataFile

1-* WorkingColumn

1-*CombineColumn

Transform

1-* TransformInstruction

Analyze

1-* VectorizeInstruction

1-* SparseStack

Recommend

RecommendColumn

CONFIGURATION - MULTIPLE FILE SOURCE

tmdb_5000_credits.csv

tmdb_5000_movies.csv

```json
"files" : [
    {
        "filename" : "tmdb_5000_credits.csv",
        "na-filter": true,
        "workingColumns": [
            {
                "header" : "movie_id",
                "is-json" : false
            },
            {
                "header" : "title",
                "is-json" : false
            },
            {
                "header" : "cast",
                "is-json" : true,
                "extract-element" : "name",
                "item-count": 3
            },
            {
                "header" : "crew",
                "is-json" : true
            }
        ],
        "drop": [],
        "rename" : [{"movie_id": "id"}],
        "combineColumns" : []
    },
    {
        "filename" : "tmdb_5000_movies.csv",
        "na-filter": false,
        "workingColumns": [
            {
                "header" : "id",
                "is-json" : false
            },
            {
                "header" : "genres",
                "is-json" : true,
                "extract-element" : "name",
                "item-count": 3
            },
```

WELCOME PAGE

Getting Started

Congratulations on installing and executing the Kepler Recommendation Engine.
- Upload one or more data files.
- Define a configuration for your recommendation system in a JSON file.
- Upload the configuration file to the recommendation system.
- Parse the configuration file for issues and edit to make corrections.
- Process the data files.
- Make recommendations.

Datasets TedTalk https://www.kaggle.com/miguelcorraljr/ted-ultimate-dataset

Quick Link Reference

Recommendation REST endpoints: Swagger

Configuration editor and parser: Editor

Test your recommendation configuration: Recommender

Upload: data file

Upload: configuration file

CONFIGURATION EDITOR

Configuration Editor

/workspaces/Kepler/upload/indan_movies.cfg

Choose a configuration file: [indan_movies.cfg ▾] [Select]

```
{
    "files" : [
        {
            "filename" : "bollywood_meta_2010-2019.csv",
            "na-filter": true,
            "workingColumns": [
                {
                    "header" : "imdb_id",
                    "is-json" : false
                },
                {
                    "header" : "title",
                    "is-json" : false
                },
                {
                    "header" : "genres",
                    "is-delim" : true,
                    "separator" : "|",
                    "item-count": 3
                }
            ],
            "rename" : [],
            "combineColumns" : []
        },
        {
            "filename" : "bollywood_text_2010-2019.csv",
            "na-filter": false,
            "workingColumns": [
                {
                    "header" : "imdb_id",
```

[Save & Parse] ☐ Hide Warnings

```
[
    {
        "code": 0,
        "message": "Start audit.",
        "level": "Info",
        "extra": ""
    },
    {
        "code": 2008,
        "message": "One of the file sections does not define an error-bad-lines property, a value of FALSE will be
```

RECOMMENDER PAGE

SWAGGER

Kepler Recommender System [1.0.0] OAS3

/static/swagger.json

Metrowest Boston Developers Machine Learning Group

MIT

Servers

[/ ▾]

Configuration Management ⌄

GET	`/v1/configuration` Returns a list of all uploaded configurations

Session Management ⌄

GET	`/v1/session` Returns a list of all sessions

POST	`/v1/session` Create a new session

Recommendation ⌄

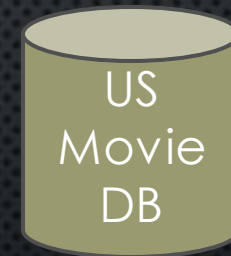| POST	`/v1/loadAndParseConfig` Loads, parses and analyzes configuration and associated data

POST	`/v1/configRecommend` Utilizing the onfiguration file and loaded data, make a recommendation

REST AND SESSIONS

- THE REST PROTOCOL, BASED ON HTTP IS STATELESS.

- THE KEPLER RECOMMENDATION ENGINE SUPPORTS MULTIPLE, SIMULTANEOUS, RECOMMENDATION CONFIGURATIONS. EACH CONTAINED WITHIN ITS OWN SESSION.

SessionId
"e41860f3ff3c450ea61fcd5d9d9f5428"

US Movie DB

SessionId
"33713b9c77594113ac517989396e4249"

TEDTalk DB

CREATE A SESSION

Session Management

GET	/v1/session	Returns a list of all sessions

POST	/v1/session	Create a new session

Parameters

Cancel

No parameters

Execute	Clear

Responses

Curl

```
curl -X POST "http://127.0.0.1:5000/v1/session" -H  "accept: */*" -d ""
```

Request URL

```
http://127.0.0.1:5000/v1/session
```

Server response

Code   Details

200
Undocumented   Response body

```
"33713b9c77594113ac517989396e4249"
```

Download

LIST AVAILABLE CONFIGURATIONS

Configuration Management

| GET | /v1/configuration | Returns a list of all uploaded configurations |

Parameters

Cancel

No parameters

Execute

Clear

Responses

Curl

```
curl -X GET "http://127.0.0.1:5000/v1/configuration" -H  "accept: */*"
```

Request URL

```
http://127.0.0.1:5000/v1/configuration
```

Server response

Code	Details
200	Response body

```
[
  "indan_movies.cfg",
  "sample.cfg",
  "sample_-_Copy.cfg",
  "tedtalk.cfg",
  "us_movies.cfg"
]
```

Download

LOAD AND PARSE SCHEMA

LOAD AND PARSE EXAMPLE

Recommendation ⌄

POST `/v1/loadAndParseConfig` Loads, parses and analyzes configuration and associated data

Parameters   Cancel

No parameters

Request body required   application/json ⌄

Load, Parse and Analyze

```
{
    "sessionId": "33713b9c77594113ac517989396e4249",
    "filename": "us_movies.cfg"
}
```

Execute   Clear

RECOMMENDATION SCHEMA

Recommendation

POST `/v1/loadAndParseConfig` Loads, parses and analyzes configuration and associated data

POST `/v1/configRecommend` Utilizing the onfiguration file and loaded data, make a recommendation

Parameters

Try it out

No parameters

Request body required

application/json

Make a recommendation

Example Value | Schema

```
{
  "sessionId": "string",
  "prompt": "string"
}
```

RECOMMENDATION EXAMPLE

POST `/v1/configRecommend` Utilizing the onfiguration file and loaded data, make a recommendation

Parameters   Cancel

No parameters

Request body required   application/json

Make a recommendation

```
{
    "sessionId": "33713b9c77594113ac517989396e4249",
    "prompt": "Alien"
}
```

Execute   Clear

RECOMMENDATION RESULTS

Responses

Curl

```
curl -X POST "http://127.0.0.1:5000/v1/configRecommend" -H  "accept: */*" -H  "Content-Type: application/json" -d "{\"sessionId\":\"33713b9c77594113ac517989396e4249\",\"prompt\":\"Alien\"}"
```

Request URL

```
http://127.0.0.1:5000/v1/configRecommend
```

Server response

Code	Details
200 *Undocumented*	**Response body**

```
{"columns":["Movie_ID","Name","Genres"],"index":
[2403,2244,3146,740,3014,218,838,2138,2391,863,1804,2445,1482,3372,1437,4253,0,425,4228,134],"data":
[[679,"Aliens",["Horror","Action","Thriller"]],[77948,"The Cold Light of Day",["Action","Thriller"]],
[10306,"Poltergeist III",["Horror","Thriller"]],[8078,"Alien: Resurrection",["Science
Fiction","Horror","Action"]],[11336,"The Dead Zone",["Horror","Science Fiction","Thriller"]],
[324668,"Jason Bourne",["Action","Thriller"]],[8077,"Alien\u00b3",["Science Fiction","Action","Horror"]],
[1710,"Copycat",["Drama","Thriller"]],[75638,"Red Lights",["Thriller"]],[10375,"D-Tox",
["Action","Thriller"]],[9092,"Snow White: A Tale of Terror",["Fantasy","Horror"]],[79694,"The Apparition",
["Horror","Thriller"]],[71469,"The Darkest Hour",["Horror","Action","Thriller"]],[13006,"Split Second",
["Thriller","Action","Horror"]],[118957,"Bait",["Action","Horror","Thriller"]],[347755,"Wind Walkers",
["Action","Horror","Thriller"]],[19995,"Avatar",["Action","Adventure","Fantasy"]],[954,"Mission:
Impossible",["Adventure","Action","Thriller"]],[323271,"Unsullied",["Thriller","Action",...]],
[177677,"Mission: Impossible - Rogue Nation",["Action","Adventure","Thriller"]]]}
```

Response headers

```
 content-length: 1208
 content-type: text/html; charset=utf-8
 date: Wed,28 Apr 2021 00:29:25 GMT
 server: Werkzeug/1.0.1 Python/3.9.1
```