Knowledge Discovery

and

Management

Source Code

**Algorithms:**

**1. Recommendation**

package com.unresyst;

import java.io.File;

import java.io.FileNotFoundException;

import java.util.List;

import java.io.IOException;

import org.apache.commons.cli2.OptionException;

import org.apache.mahout.cf.taste.common.TasteException;

import org.apache.mahout.cf.taste.impl.model.file.FileDataModel;

import org.apache.mahout.cf.taste.impl.recommender.CachingRecommender;

import org.apache.mahout.cf.taste.impl.recommender.slopeone.SlopeOneRecommender;

import org.apache.mahout.cf.taste.model.DataModel;

import org.apache.mahout.cf.taste.recommender.RecommendedItem;

import org.apache.mahout.cf.taste.impl.common.LongPrimitiveIterator;

public class UnresystBoolRecommend {

public static void main(String... args) throws FileNotFoundException, TasteException, IOException, OptionException {

// create data source (model) - from the csv file

File ratingsFile = new File("datasets/moviesdata.csv");

DataModel model = new FileDataModel(ratingsFile);

// create a simple recommender on our data

CachingRecommender cachingRecommender = new CachingRecommender(new SlopeOneRecommender(model));

// for all users

for (LongPrimitiveIterator it = model.getUserIDs(); it.hasNext();){

long userId = it.nextLong();

// get the recommendations for the user

List<RecommendedItem> recommendations = cachingRecommender.recommend(userId, 10);

// if empty write something

if (recommendations.size() == 0){

System.out.print("User ");

System.out.print(userId);

System.out.println(": no recommendations");

}

// print the list of recommendations for each

for (RecommendedItem recommendedItem : recommendations) {

System.out.print("User ");

System.out.print(userId);

System.out.print(": ");

System.out.println(recommendedItem);

}

}

}

}

**2.Convertion Java code** : To convert the mahout output to json format .I have used the following program.

import java.io.\*;

import java.io.BufferedReader;

import java.io.FileReader;

import java.io.FileWriter;

import java.io.IOException;

import java.io.InputStreamReader;

import java.io.LineNumberReader;

import java.net.MalformedURLException;

import java.net.URL;

public class Test {

public static void main (String args[]) throws IOException {

BufferedReader br = null;

String sCurrentLine;

br = new BufferedReader(new FileReader("/home/cloudera/Desktop/movies2.txt"));

FileWriter file = new FileWriter("/home/cloudera/Desktop/test.json");

file.write("[");

for ( int i=1; i<=943; i++)

{

int count=0;

file.write("{");

file.write("\"id\":\"User\_"+i);

while ((sCurrentLine = br.readLine()) != null) {

//if(sCurrentLine.contains("\t")){

String Array1[] = sCurrentLine.split(":");

String title = Array1[2];

String Array2[] = title.split(",");

if(count>=0&&count<10)

{

file.write("\",\"title\":\""+Array2[0]);

}

if(count>8)

{

break;

}

count=count+1;

}

file.write("\"},");

}

file.write("]");

file.close();

}

}

**Graphical User Interface Code**

1. **HTML code**

<div data-role="page" id="page1">

<div data-role="header" data-theme="b" class="hn-wrapper ui-bar-b" style="color:purple" >

<h1> Movies And Fun </h1>

</div>

<div style="width:100%; ">

<b>I am user </b>

<input type="text" name="name"><br>

<a href="#movies" data-transition="flow"><button>Movies to Watch</button></a> <br>

<a href="#movies\_watched" data-transition="flow"><button id="watch">Movies Watched</button></a> <br>

<a href="#Weather" data-transition="flow"><button>Weather</button></a>

</div>

</div>

<div data-role="page" id="movies">

<div data-role="header" data-theme="b" class="hn-wrapper ui-bar-b" style="color:black" >

<h1> Movies to watch </h1>

<a data-rel="back" data-icon="home">Home</a>

</div>

<button id="movies">Movies to Watch</button>

<font face="verdana" color="blue" size ="5"> The following are the movie IDs recommended for the user to watch </font>

<h2> <div id="write3"></div> <h2>

</div>

<div data-role="page" id="movies\_watched">

<div data-role="header" data-theme="b" class="hn-wrapper ui-bar-b" style="color:purple" >

<h1> Movies Watched </h1>

<a data-rel="back" data-icon="home">Home</a>

</div>

<button id="moviesw">Movies Watched</button>

<font face="verdana" color="blue" size ="5"> The movies watched by the </font>

<h2> <div id="write2"></div> <h2>

</div> </div>

<div data-role="page" id="Weather">

<div data-role="header" data-theme="b" class="hn-wrapper ui-bar-b" style="color:purple" >

<h1> Weather </h1>

<a data-rel="back" data-icon="home">Home</a>

</div>

<h2>Weather Service:</h2>

State code: <input type="text" id="state"><br>

City : <input type="text" id="city"><br>

<button id="button1" data-mini="true" data-inline="true">Show Temperature</button> <br><br>

<script>

var button1 = document.getElementById('button1');

$('#button1').click(function(){

var returnMsg;

var state=$( "#state" ).val();

var city=$( "#city" ).val();

$(document).ready(function() {

$.ajax({

url: 'http://api.wunderground.com/api/36b799dc821d5836/conditions/q/'+state+'/'+city+'.json',

async: false,

contentType: "application/json",

dataType: 'jsonp'

}).then(function(data) {

$.each(data, function(idx, obj) {

returnMsg = "'"+city+"'"+" Temperature is " +obj.temp\_f + " weather is " + obj.weather;

document.getElementById('write').innerHTML = returnMsg;

});

});

});

});

button1.addEventListener('click', onClick, false);

</script>

<h1> <div id="write"></div></h1>

</div>

<div data-role="page" id="Graphics">

</div>

</div>

1. **Java script**

//button.addEventListener('click', onClick, false);

//-----------------movies to watch

var movies = document.getElementById('movies');

$('#movies').click(function(){

$.getJSON("http://192.168.29.129:8983/solr/collection1\_shard1\_replica1/select?q=\*&wt=json&json.wrf=?&indent=true",

function(result){

for (var i=0;i<3; i++)

{

for (var j=0; j<1; j++)

{

document.getElementById('write3').innerHTML=

result.response.docs[i].title[j] + "<br> " + result.response.docs[i+2].title[j] +"<br>" +result.response.docs[i+1].title[j] + "<br>" + result.response.docs[i+3].title[j] + "<br>" +

result.response.docs[i+4].title[j]

;

}

}

});

});

//----------------Movieswatched

var moviesw = document.getElementById('moviesw');

$('#moviesw').click(function(){

$.getJSON("http://192.168.29.129:8983/solr/collection1\_shard1\_replica1/select?q=\*&wt=json&json.wrf=?&indent=true",

function(result){

for (var i=0;i<3; i++)

{

for (var j=0; j<1; j++)

{

document.getElementById('write2').innerHTML=

result.response.docs[i+5].title[j] + "<br> " + result.response.docs[i+6].title[j] +"<br>" +result.response.docs[i+7].title[j] + "<br>" + result.response.docs[i+8].title[j] + "<br>" +

result.response.docs[i+9].title[j]

;

}

}

});

});

1. **CSS**

@keyframes 'bg-animation' {

0% {

background: #C9C9C9;

}

50% {

background: #61BE50;

}

100% {

background: #C9C9C9;

}

}

@-webkit-keyframes 'bg-animation' {

0% {

background: #C9C9C9;

}

50% {

background: #61BE50;

}

100% {

background: #C9C9C9;

}

}

$('.ui-bar-b').css('background-image', '-moz-linear-gradient(top,

#00009d,

#00578e);');

**URL queries to access my datasets**

**Accessing from the Server**

1. Data of user\_444 will be displayed

<http://134.193.136.127:8983/solr/collection1_shard1_replica1/get?id=User_444&wt=json&inde%20nt=true>

**Accesing from local server**

1. Recommended data set for movied id 888639725 will be displayed

http://192.168.29.129:8983/solr/collection1\_shard1\_replica1/select?q= 888639725 &wt=json&json.wrf=?&indent=true

**My Github link**

<https://github.com/rt6f8/Examm>

**References**

<https://cwiki.apache.org/confluence/display/solr/Common+Query+Parameters>

<http://anchetawern.github.io/blog/2013/06/15/getting-started-with-solr/>