



ECOLE INTERNATIONALE  
DES SCIENCES DU  
TRAITEMENT DE L'INFORMATION

EISTI

NOSQL PROJECT

# Implementation of a Web Application Using MongoDB

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Cergy - March 30, 2020

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## Contents

<b>1</b>	<b>Introduction</b>	<b>3</b>
<b>2</b>	<b>General Objectives</b>	<b>3</b>
2.1	Specific Objective of the Project . . . . .	3
<b>3</b>	<b>Technical Solution</b>	<b>3</b>
<b>4</b>	<b>Introduction of the Developing Software</b>	<b>3</b>
4.1	Mango DB.Atlas . . . . .	3
4.2	Python . . . . .	4
4.3	Django . . . . .	4
4.4	Other technologies used . . . . .	4
<b>5</b>	<b>Front End - Functionalities for the User</b>	<b>4</b>
<b>6</b>	<b>Front End - Web interface</b>	<b>5</b>

## List of Figures

1	Data base connection details. . . . .	3
2	Home page. . . . .	5
3	Add a New movie form . . . . .	6
5	Charts and statistics. . . . .	7
6	About page. . . . .	8
7	Update a movie. . . . .	9
4	Upadte retrieve or delete a movie and load csv file. . . . .	10

# 1 Introduction

## 2 General Objectives

The general objective of the project is to create a main frame to display the list of rows, and each row represents films. Also create buttons to update film and delete film. And finally have a button to update and add a new film.

### 2.1 Specific Objective of the Project

- Create a web application;
- Incorporate a films dataset using MongoDB;
- Design the front end (web based) allowing Insert, Update and Delete queries;
- Connect the front end and the back end with the database;
- Implementing the designed system.

## 3 Technical Solution

There are three major developing software that we use in our project, Python, MangoDB as NoSQL Data base and Django framework.

## 4 Introduction of the Developing Software

### 4.1 Mango DB.Atlas

MongoDB is a distributed, universal, document-based database that was designed for modern application developers and for the cloud age, used by millions of developers to underpin the world's most innovative products and services. MongoDB Atlas is the global cloud-based database for modern applications. It is distributed and secure by default, and available as a fully managed service on AWS, Azure and Google Cloud.



**Connection details** The creation of a cluster and the connection to Django project is actually very easy as shown in the figure below :

```
DATABASES = {  
    'default': {  
        'ENGINE': 'django',  
        'CLIENT': {  
            'host': 'mongodb+srv://admin:Admin123@cluster0-c3oey.mongodb.net/test?retryWrites=true&w=majority',  
            'USERNAME': 'admin',  
            'PASSWORD': 'Admin123',  
            'authMechanism': 'SCRAM-SHA-1'  
        }  
    }  
}
```

Figure 1: Data base connection details.

## 4.2 Python

In this project, our team choose Python. For the first and the most important reason is that Python is the mostly used software in the data science field. The essential of the Python is that it simplified the complex coding grammar with fewer lines, and it is an open source that popular in business model. With more and more packages created, Python has an comprehend function to analyze data. The the other reason for using python over Java is that Python has a great flexibility that can easily connected with the web.



## 4.3 Django

Django is a web framework, which permit use Model-View-Template (MVT) architectural pattern. We decided to select Django for development de system because it is the most common Python web framework, allowing reusability of components, rapid development and some user control interface.

# django

## 4.4 Other technologies used



Chart.js



GitHub

## 5 Front End - Functionalities for the User

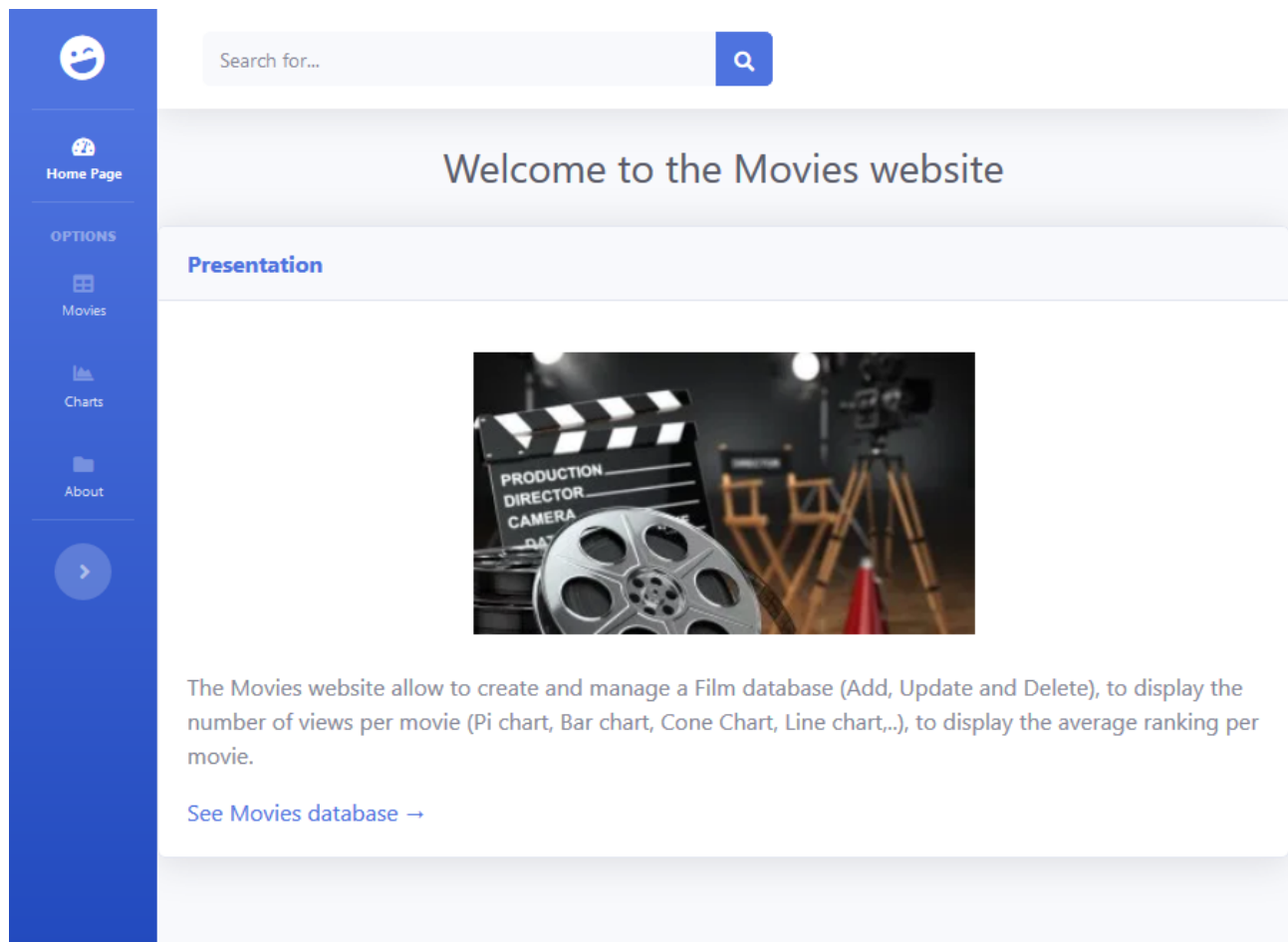
### Main functionalities

- Upload of the Movie csv file and the storage of the data within a database
- Add, Delete, Update a Movie
- Search through the table for any movie field
- Graphs

### Statistic functionality

- Displays in Pie chart the number of movies by genre.
- Calculate in a bar chart the average score obtained by movie genre.

## 6 Front End - Web interface



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Figure 2: Home page.

The image shows a web application interface for adding a new movie. On the left is a blue sidebar with a logo at the top, followed by a 'Home Page' link, an 'OPTIONS' section with links to 'Movies', 'Charts', and 'About', and a circular button with a right arrow. At the top of the main content area is a search bar with the placeholder text 'Search for...' and a magnifying glass icon. Below this is a header section titled 'Add a New Movie'. The main form area is titled 'Add a new Movie' and contains the following fields:

- Title\* (text input)
- Star Actor\* (text input)
- Movie Director\* (text input)
- Movie Writer\* (text input)
- Country\* (text input)
- Genre\* (dropdown menu with a dashed line placeholder)
- Rating (text input)
- Score (text input with a vertical slider icon)
- Runtime (text input with a vertical slider icon)
- Year\* (dropdown menu with a dashed line placeholder)
- Release (text input)

At the bottom of the form are two buttons: a green 'Submit' button with a database icon and a grey 'Back to list' button with a list icon.

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Figure 3: Add a New movie form

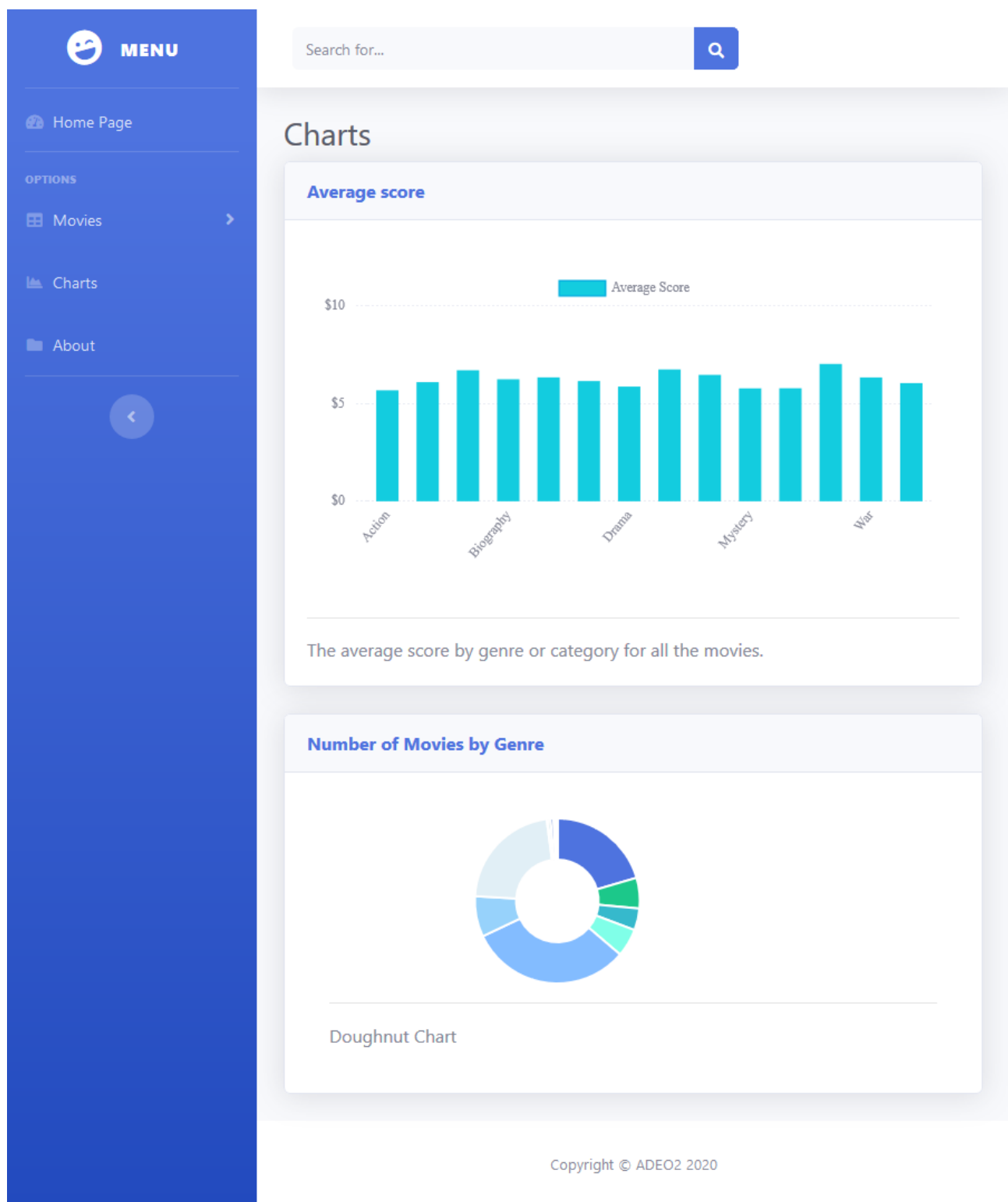





Figure 5: Charts and statistics.

  
Home Page  
OPTIONS  
Movies  
Charts  
About

### About our Shcool



se transforme et devient


Grande École de sciences, d'ingénierie, d'économie et de gestion de CY Cergy Paris Université


We are Data Science student in our final year at the EISTI engineering school also know as Cy Tech.


School website → [Big Data Master description](#) →


### About Us

This project was realized by **Cylia BERKANE** & **Chidinma Obiagwu** as a final project for NoSQL Class Given by Professor **Rachid Chelouah**

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### About the Website

Movies Website is build with Django Framework, Django is the most common python web framework, which permit use Model-View-Template (MVT) architectural pattern, allowing reusability of components.

As a NoSQL Database we have choosed to use MongoDB.Atlas data in the cloud.

As a template for our website we used a Bootstrap framework

 [Git Repository for this project](#)



Search for...

## Add or update a Movie

### Movie Form

Title\*

10 Cloverfield Lane

Star Actor\*

John Goodman

Movie Director\*

Dan Trachtenberg

Movie Writer\*

Josh Campbell

Country\*

USA

Genre\*

Drama

Rating

PG-13

Score

7.2

Runtime


104

Year\*

2016

Release

2016-00-11/03/16

 Submit


 Back to list

Figure 7: Update a movie.

Search for...

q

MOVIES

Home Page

options

MOVIES

Charts

About

Movies

Through this table we can Update or delete a specific movie, we are also able to load a Movies csv file.

Upload CSV File

Upload a file Browse... No file selected. Only accepts CSV files Upload

Movies DataTable

Show 10 entries

Search:

+ Add New

Title	Actor	Director	Writer	Genre	Country	Rating	Score	Year	Release	Runtime	
Anthropoid	Jamie Dornan	Sean Ellis	Sean Ellis	Biography	Czech Republic	R	7.2	2016	Sept. 9, 2016	120	
Sully	Tom Hanks	Clint Eastwood	Todd Komarnicki	Biography	USA	PG-13	7.5	2016	Sept. 9, 2016	96	
The Disappointments Room	Kate Beckinsale	D.J. Caruso	Wentworth Miller	Drama	USA	R	3.9	2016	Sept. 9, 2016	85	
Burke and Hare	Bill Bailey	John Landis	Piers Ashworth	Comedy	UK	R	6.2	2010	Sept. 9, 2011	91	
Contagion	Matt Damon	Steven Soderbergh	Scott Z. Burns	Drama	USA	PG-13	6.6	2011	Sept. 9, 2011	106	
Warrior	Tom Hardy	Gavin O'Connor	Gavin O'Connor	Drama	USA	PG-13	8.2	2011	Sept. 9, 2011	140	
9	Elijah Wood	Shane Acker	Pamela Pettler	Animation	USA	PG-13	7.1	2009	Sept. 9, 2009	79	
Asylum	Natasha Richardson	David Mackenzie	Patrick McGrath	Drama	UK	R	6.1	2005	Sept. 9, 2005	99	
The Exorcism of Emily Rose	Laura Linney	Scott Derrickson	Paul Harris Boardman	Drama	USA	PG-13	6.7	2005	Sept. 9, 2005	119	
The Man	Samuel L. Jackson	Les Mayfield	Jim Piddock	Action	Germany	PG-13	5.5	2005	Sept. 9, 2005	83	
Title	Actor	Director	Writer	Genre	Country	Rating	Score	Year	Release	Runtime	Edit/Delete

Showing 1 to 10 of 6,770 entries

Previous12345...677Next

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Figure 4: Upadte retrieve or delete a movie and load csv file.