

# AvengersFlix's Case Study

## Overview

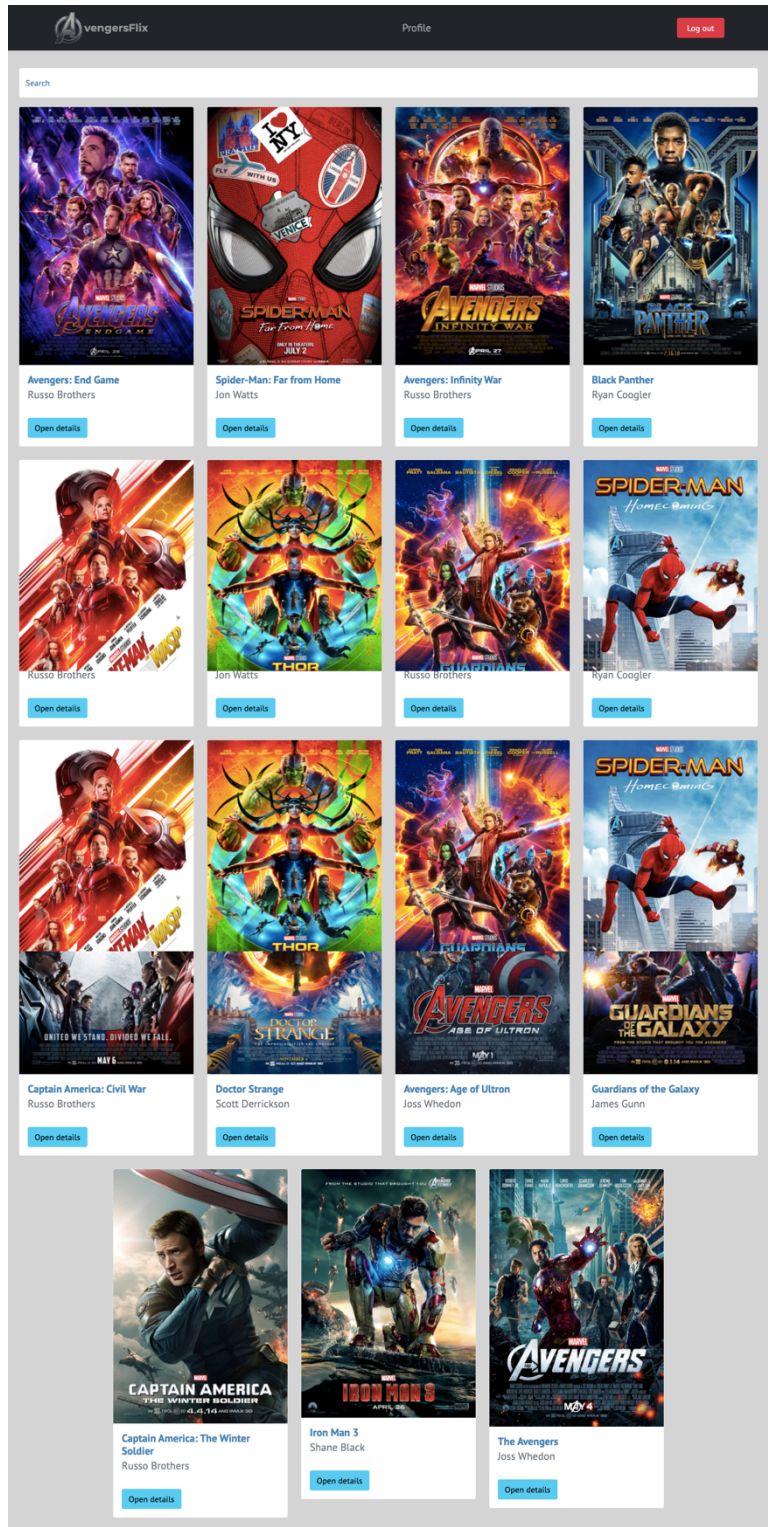
AvengersFlix is a web application developed using ReactJS on the frontend, NodeJS and ExpressJS on the backend and MongoDB as the database (MERN stack). AvengersFlix provides users a site where they can access information about the most popular Avengers movies and their details in one location. Users are able to create an account, update their personal data, and create a list of favorite movies.

## Purpose & Context

AvengersFlix was a personal project that I built as part of my web development course at CareerFoundry. It allowed me to demonstrate my skills in developing a full-stack web application using MERN stack.

## Objective

The aim of the project was to have an ambitious and functional full-stack project that I can add to my professional portfolio. The problem I wanted to solve was to build the complete server-side and client-side for AvengersFlix from scratch.



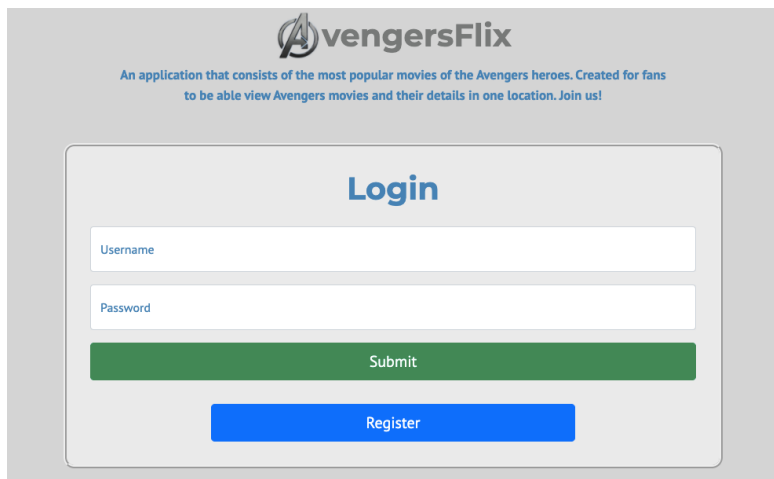
## Approach

### Backend

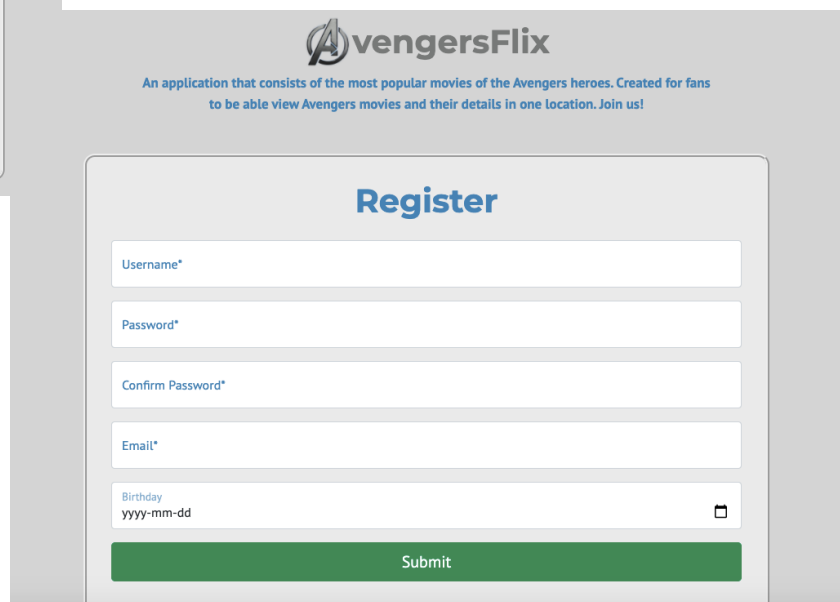
I created a RESTful API using NodeJS and ExpressJS. This API interacts with a NoSQL database in MongoDB Atlas. The API can be accessed via commonly used HTTP methods GET, POST, PUT and DELETE. These CRUD methods are used to retrieve data from the database as well as send and store data in the database. The API presents this data in JSON format. I also included user authentication and authorization features in the form of basic HTTP authentication and JWT authentication. Finally, I used the Postman API platform to test and work with my RESTful API.

### Frontend

Upon completion of the backend, I started to build the web interfaces that users would interact with when making requests to and receiving responses from the RESTful API. I created a single-page, responsive application, developed with React and Redux that provides users with several interface views. Firstly, a login view for existing users or a registration view for new users. A main view for displaying a list of all the movies. A single movie view for displaying data about a single movie and allowing users to add/delete this movie to their favorites list. A director and genre view for each movie. Lastly, a profile view where users can update their own information and view their favorites list.



The image shows a login form for 'AvengersFlix'. At the top, there is a logo with a stylized 'A' and the text 'AvengersFlix'. Below the logo is a tagline: 'An application that consists of the most popular movies of the Avengers heroes. Created for fans to be able view Avengers movies and their details in one location. Join us!'. The form itself is titled 'Login' in blue. It contains two input fields: 'Username' and 'Password'. Below these fields is a green 'Submit' button. At the bottom of the form is a blue 'Register' button.



The image shows a register form for 'AvengersFlix'. At the top, there is a logo with a stylized 'A' and the text 'AvengersFlix'. Below the logo is a tagline: 'An application that consists of the most popular movies of the Avengers heroes. Created for fans to be able view Avengers movies and their details in one location. Join us!'. The form itself is titled 'Register' in blue. It contains five input fields: 'Username\*', 'Password\*', 'Confirm Password\*', 'Email\*', and 'Birthday' (with a placeholder 'yyyy-mm-dd' and a calendar icon). Below these fields is a green 'Submit' button.

## Avengers: End Game

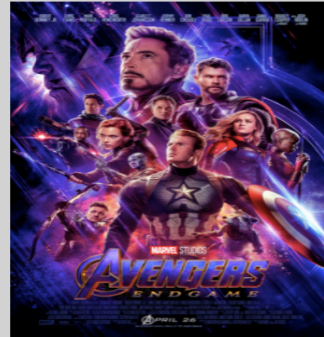
[Russo Brothers](#)

Released: 2019

Rating: 8.4/10

Genre: [Action](#)

Add to favorites



After the devastating events of Avengers: Infinity War, the universe is in ruins. With the help of remaining allies, the Avengers assemble once more in order to reverse Thanos' actions and restore balance to the universe.

Back

## Russo Brothers

Anthony Russo and Joseph Russo, collectively known as the Russo brothers, are American directors, producers, and screenwriters. They direct most of their work together.

Age: 51 & 50

Back

## Action

A film genre in which the protagonist or protagonists are thrust into a series of events that typically include violence, extended fighting, physical feats, rescues and frantic chases.

Back

## Current Details

Username: SpicyP

Email: [spicyP@email.com](mailto:spicyP@email.com)

Birthday: April 2nd 1994

Favorited Movies

- [Spider-Man: Far from Home](#)
- [Iron Man 3](#)
- [Spider-Man: Homecoming](#)
- [Guardians of the Galaxy Vol. 2](#)
- [Captain America: Civil War](#)
- [Avengers: Age of Ultron](#)
- [Avengers: Infinity War](#)

Back

## Update User

Only fill in the fields you want updated







Submit

Delete Account

## **Challenges**

AvengersFlix was my favorite project to date, but it presented many challenges throughout. I enjoyed building the API and using this to implement the client-side features. However, I had trouble with implementing JWT authentication, specifically understanding how the communication between the backend and frontend works. When developing the frontend, it took me some time to understand how Redux works to serve and improve React applications. These issues were challenging as they were foreign topics that took me a while to grasp. Ultimately, by staying persistent and focuses on one task at a time, I was able to conquer these challenges and understand the concepts at hand. Additionally, my tutor, mentor and fellow CareerFoundry peers were helpful throughout the whole journey.

## **Duration**

Completed start to finish in about a month and a half. The development of this application took me longer than it normally takes me to complete a project. This was because I needed time to wrap my head around how the frontend and backend connect and communicate as well as how Redux supplements React. After understanding these topics, I was sure that no stones were left unturned.