# System Deployment & Intergration

-Technology Stack for Movie Recommendation App:

## Frontend:

- React.js

- React Router

- Redux (State Management)

- Fetch (API Calls)

- CSS (Styling)

## Backend:

- Node.js

- Express.js

- MongoDB (Database)

## API Integration:

- TMDB API (For fetching movie data)

## Deployment:

- Vercel (Frontend Deployment)

- Render / DigitalOcean (Backend Deployment)

- MongoDB Atlas (Cloud Database)

-Deployment Diagram:

[User] --> [React Frontend] --> [Node.js Backend] --> [MongoDB]

|

v

[TMDB API]

-Component Diagram:

[App Component] --> [Navbar Component]

--> [MovieList Component] --> [MovieCard Component]

--> [Search Component]

--> [MovieDetails Component]

-Sequence Diagram:

User --> Navbar: Enters Search Term

Navbar --> Backend: Sends Search Request

Backend --> TMDB API: Fetch Data

TMDB API --> Backend: Return Data

Backend --> React: Display Results

-Activity Diagram:

[User] --> [Home Page] --> [Search] --> [Fetch Data] --> [Display Results]

-State Diagram:

[Idle] --> [Loading] --> [Loaded] --> [Error]

-Class Diagram:

class Movie {

String title

String release\_date

Double rating

String overview

}

class User {

String username

List<Movie> favorites

}