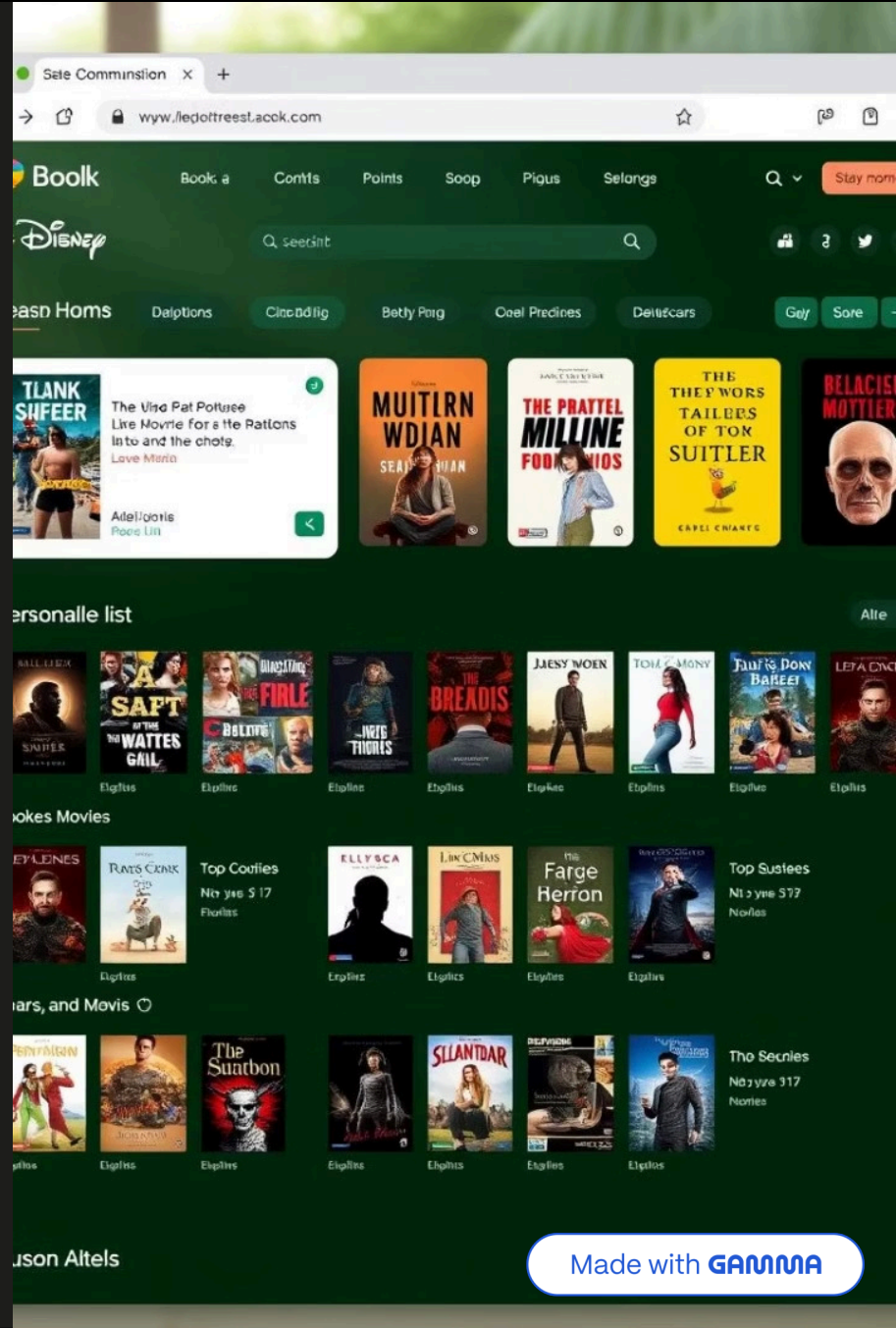
Syntra FXT GroepsWerk 2025: Personalized Wish/Watch-List Web Application

This project delivers a personalized wish/watch-list app for books and movies. Users can add, edit, and delete items with ease.

The app includes calculations like average pages per book and list completion percentage. These enrich user engagement and tracking.



Team Roles and Specializations

Timothy

UI Design and Security

Ensures a visually appealing and intuitive user interface for smooth interactions.

Xander

Data Layer & Objects, Database

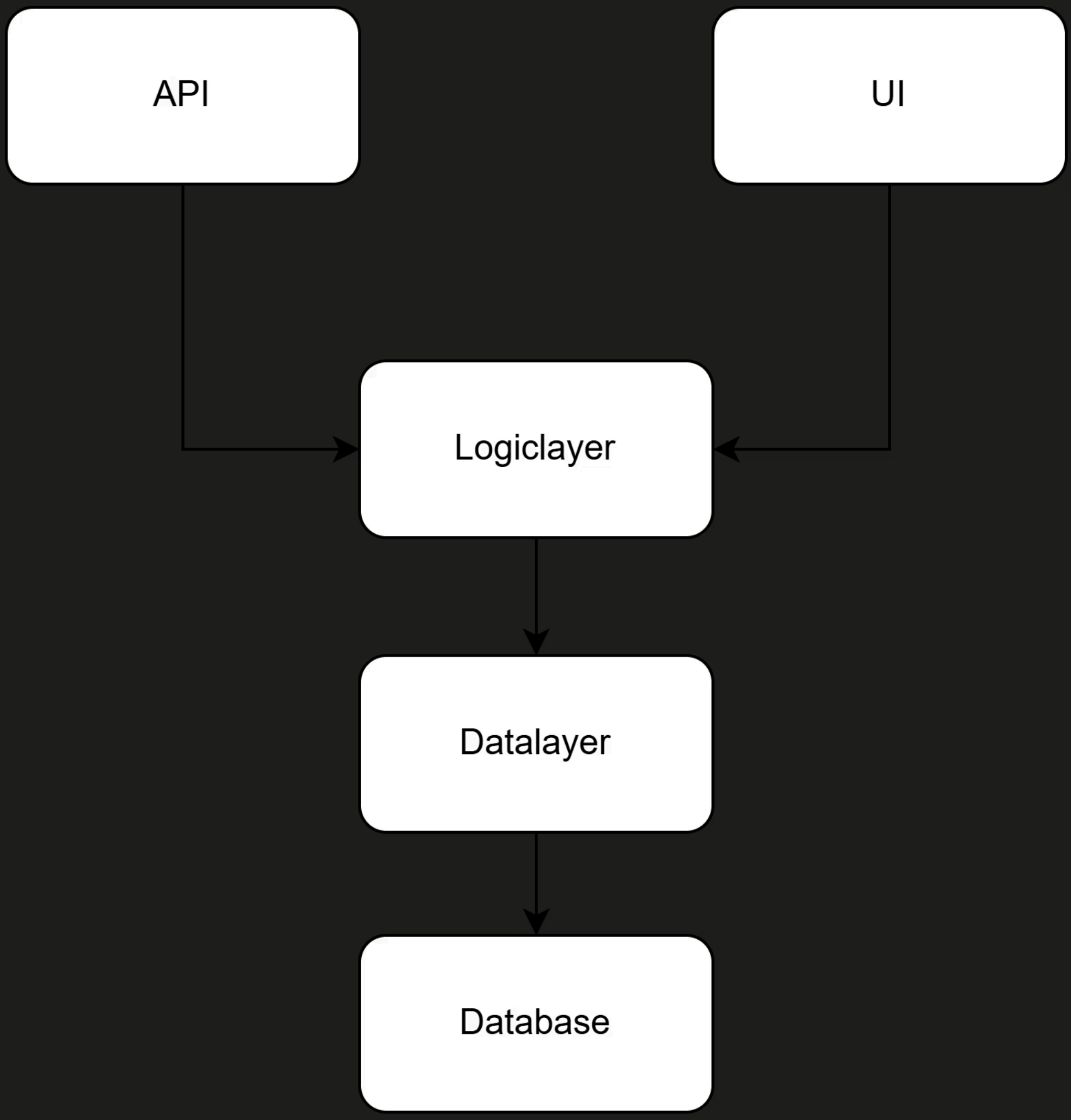
Builds robust data storage and defines the application's object models.

Felix

Logic Layer, API, Security

Develops business logic and API integration, ensuring secure data handling.

Multilayered Architecture Overview



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UI Layer (ASP.NET MVC)

Handles user interactions, displaying data based on Logic Layer inputs. Keeps UI code simple and maintainable.

2

API Layer

Serves as a parallel layer connecting external data sources for automated data fetching and integration.

3

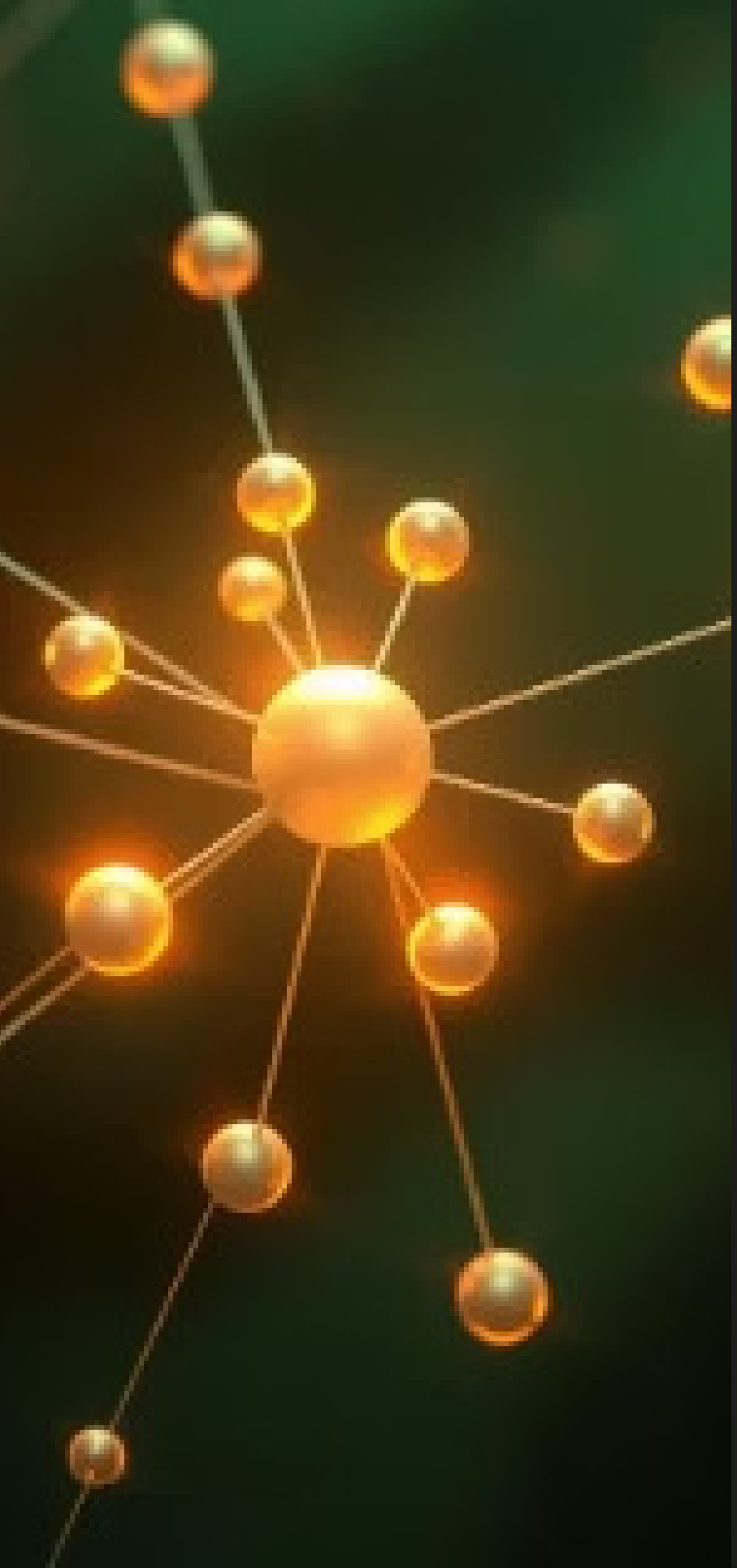
Logic Layer

Implements business rules and calculations. Controls app actions like completion percentage computations.

4

Data Layer

Handles SQL database communication and data integrity. Abstracts storage details from other layers.



Benefits of Dependency Injection (DI)

Loosely Coupled Code

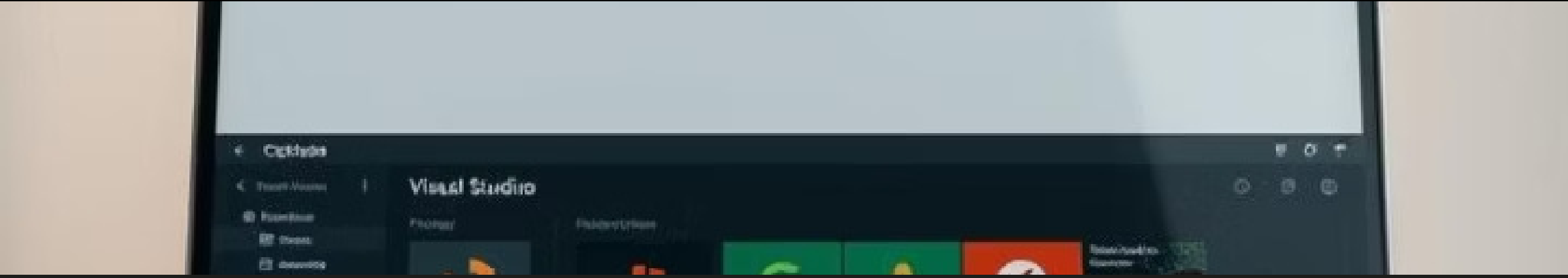
Allows component swapping with minimal changes using interfaces.

Improved Testability

Enables mock service injection, facilitating isolated unit tests.

Better Maintainability

Centralized service registration simplifies project management and updates.



Technology Stack Overview

Visual Studio

Integrated IDE supporting ASP.NET, .NET, SQL, and Git version control.

SQL Server

Reliable RDBMS with strong query capabilities and easy setup.

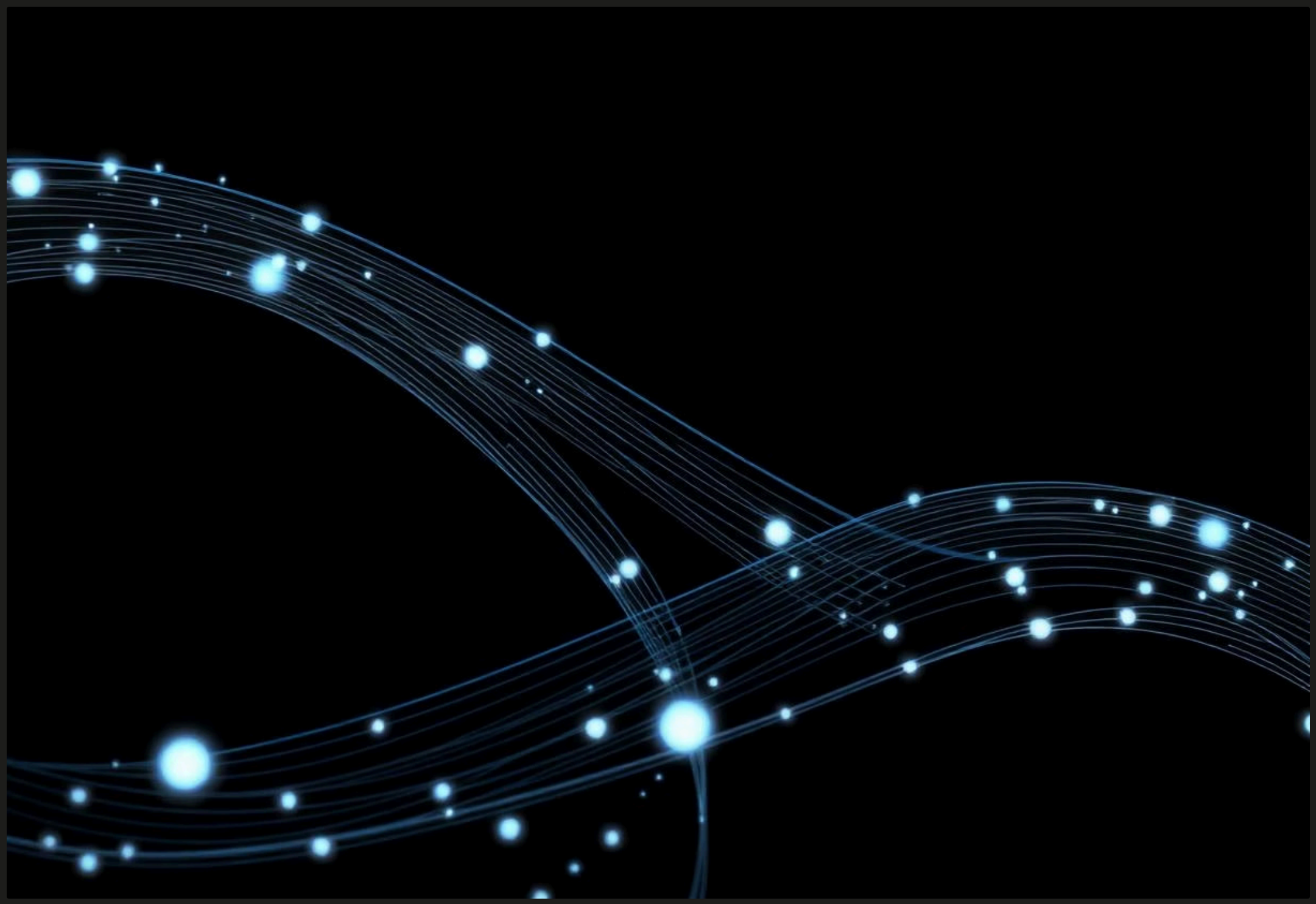
ASP.NET Core MVC

Framework promoting clean separation of concerns in web apps.

Git

Version control system enabling efficient team collaboration.

Future Enhancements and Next Steps



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Security Implementation

Integrate robust user authentication mechanisms and implement role-based access control to ensure data protection and compliance with security standards. This will safeguard sensitive user information and application integrity.

2

UI Improvements

Enhance the user interface with improved styling, dynamic animations, and advanced filtering and sorting capabilities. These enhancements will provide a more intuitive and visually appealing user experience, making the application easier and more enjoyable to navigate.

3

Scalability & Performance

Optimize database queries and refine application logic to improve overall performance and ensure the application can efficiently handle a growing number of users and data. This includes exploring caching strategies and load balancing for future expansion.

API Layer: Integration and Impact

External Data Integration

Pulls live movie and book data, automating data input and improving accuracy.

Parallel Architecture Layer

Operates alongside logic and data layers to enhance scalability and modularity.

Supports Extensibility

Enables addition of new data sources without disrupting core functionalities.

Security & Performance

Facilitates secure API communication and optimizes response handling.

Conclusion: Project Achievements and Future Outlook

Flexible, Scalable Architecture

Designed to support future expansion and feature growth seamlessly.

Clear Division of Responsibilities

Each team member led critical layers ensuring efficiency and accountability.

Future-Proof Design

Built with DI, layered structure, and API/security plans for ongoing refinement.

Syntra FXT GroepsWerk 2025 offers a maintainable, robust web app with strong foundations.