



Enterprise Software Development

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DEV SUPERPOWERS
♦ TOUR ♦



CLEAN ARCHITECTURE

ONLINE EVENT • MAY 2020



Jason Taylor

SSW Solution Architect

Developer, Mentor, Speaker & Trainer

.NET 5 (since Preview 1.0)

.NET Core (since 1.0)

.NET (since 1.0 in 2002)



[jasontaylordev](#)



github.com/jasontaylordev



jasontaylor.dev



youtube.com/jasontaylordev

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Matt Goldman

SSW Software Architect

Web and Mobile Developer

.NET Core

Xamarin



mattgoldman

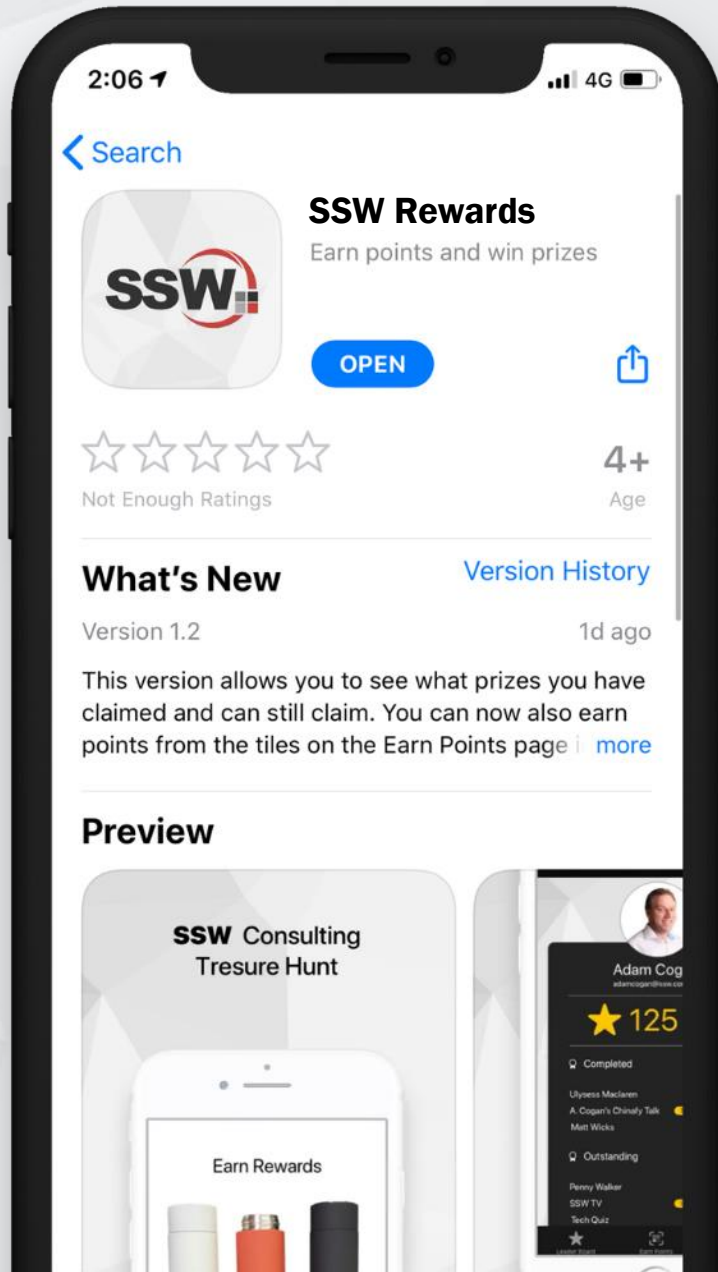


github.com/mattgoldmanssw



goforgoldman.com

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Timetable

09:00	Start
10:45 – 11:00	Morning Tea
12:30 – 13:30	Lunch
15:15 – 15:30	Afternoon Tea
17:00	Finish

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Clean Architecture

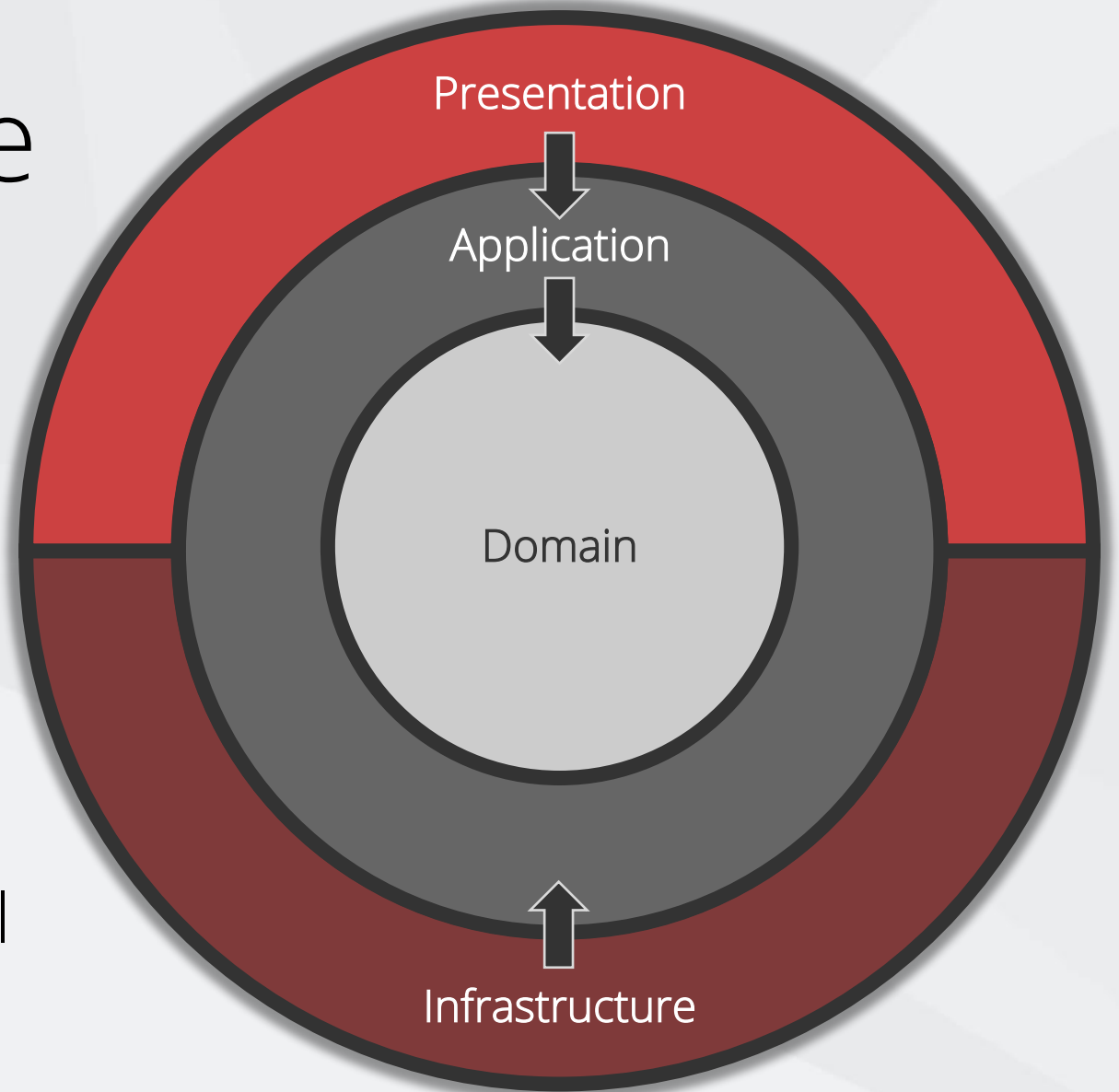
Independent of frameworks

Testable

Independent of UI

Independent of database

Independent anything external



Clean Architecture with ASP.NET Core 3.0

View on YouTube at r.ssw.com/ca-talk

👁 550,241 views*



Environment Setup



.NET Core SDK 3.1

Required, includes the .NET Core CLI and .NET Core Runtime

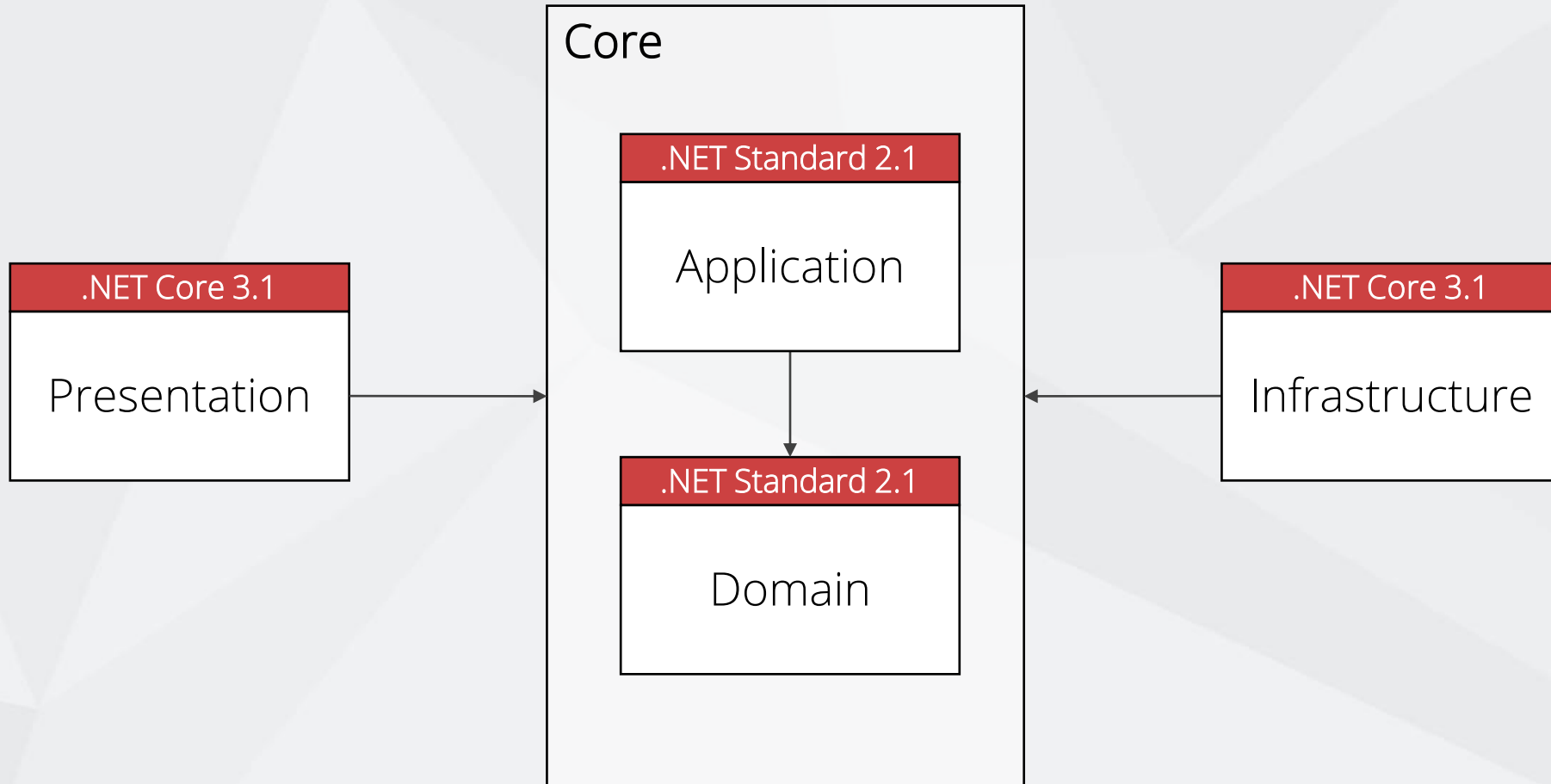
www.dot.net

Visual Studio / your preferred IDE

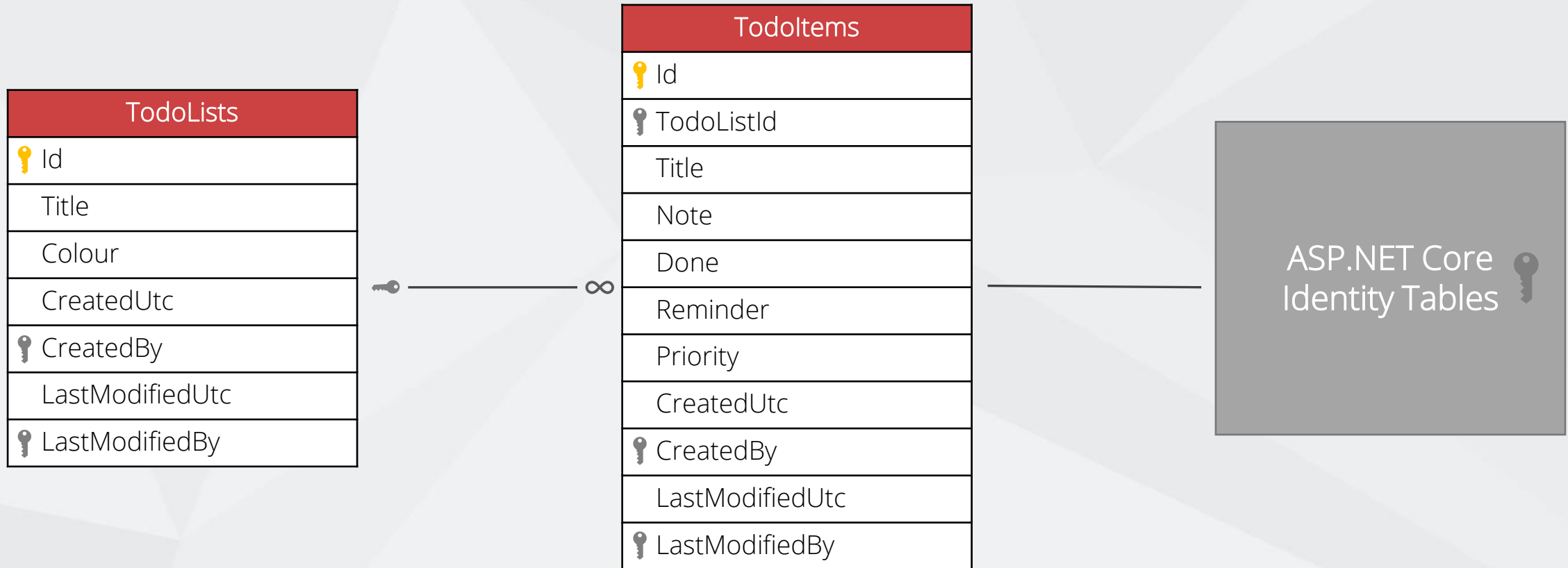
VS optional, however all demos will be coded live using Visual Studio 2019

www.visualstudio.com

Solution Structure



Database Schema



01 Getting Started

Create a New SPA with ASP.NET Core

Building a Data Model with EF Core

Creating ASP.NET Core Web API Controllers

Adding API Help Pages with OpenAPI

02 Beyond the Basics

Architecture & Design

Implementing CQRS with MediatR

Building High Performance Queries with EF Core

Simplifying Object-Object Mappings with AutoMapper

Advanced Validation with FluentValidation

Managing Unhandled Exceptions

Unit Testing Application Logic

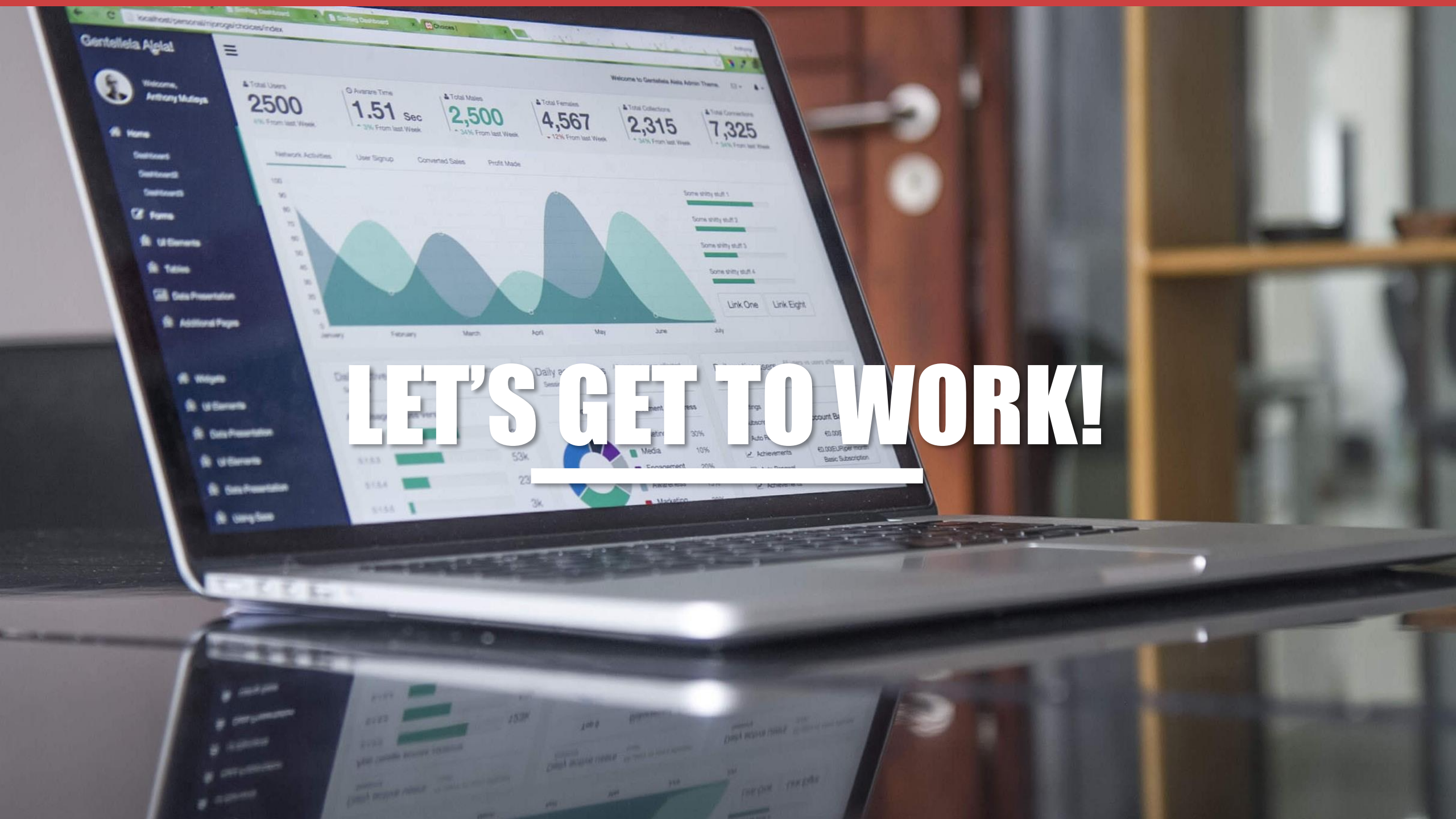
03 Advanced Topics

Working with ASP.NET Core Identity

Improved Logging with MediatR

Automating Open API Specification and Client Generation

Clean Testing



LET'S GET TO WORK!

A wide-angle landscape photograph of rolling green hills under a dramatic sunset sky. The sun is low on the horizon, casting a warm orange glow across the scene. A winding road snakes through the valleys between the hills. The foreground is a grassy field with scattered small rocks.

WRAPPING UP

Solution Template

.NET Core Template Package

ASP.NET Core 3.1

Entity Framework Core 3.1

ASP.NET Core Identity 3.1

IdentityServer4

View on GitHub r.ssw.com/ca-template



Using the Solution Template

A screenshot of a Windows Command Prompt window. The title bar reads "Command Prompt". The command history shows the user running two commands: "dotnet new -i Clean.Architecture.Solution.Template" and "dotnet new ca-sln". The output of the second command is "The template 'Clean Architecture Solution' was created successfully." The prompt is currently at "C:\Code\CaTodo>". In the bottom right corner of the terminal area, there is a purple icon consisting of a gear with three cubes inside it.

```
C:\Code\CaTodo>dotnet new -i Clean.Architecture.Solution.Template
C:\Code\CaTodo>dotnet new ca-sln
The template "Clean Architecture Solution" was created successfully.
C:\Code\CaTodo>
```

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NET CORE

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Resources



Superpowers

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Samples & Templates

Northwind Traders Sample

r.ssw.com/northwind-traders

Clean Architecture Solution Template

r.ssw.com/ca-template

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