SILK ROAD
PROFESSIONALS
DEVCON

.NET Ecosystem

By Qutfullo Ochilov

Agenda

What is .NET(Dot Net)

What Can I build with .NET?

History

.NET Core

Desktop Development with .NET

Web Development with ASP.NET

Mobile Development with .NET

Developer Tools

Resources to study

What is .NET (Dot Net)?

Web

Build web apps and services for Windows, Linux, macOS, and Docker.

Mobile

Use a single codebase to build native mobile apps for iOS, Android, and Windows.

Desktop

Create beautiful and compelling desktop apps for Windows and macOS.

Microservices

Create independently deployable microservices that run on Docker containers

Gaming

Develop 2D and 3D games for the most popular desktops, phones, and consoles.

Machine Learning

Add vision algorithms, speech processing, predictive models, and more to your apps.

Cloud

Consume existing cloud services, or create and deploy your own.

Internet of Things

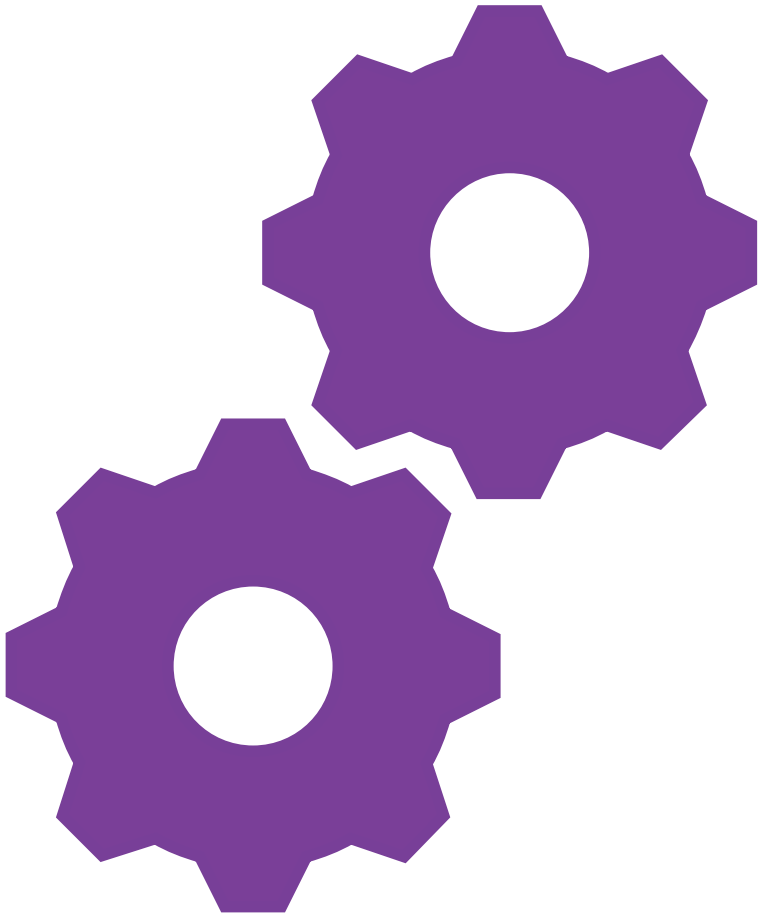
Make IoT apps, with native support for the Raspberry Pi and other single-board computers.

History of .NET Framework

- 2002
- 2006
- 2010
- 2014
- 2019

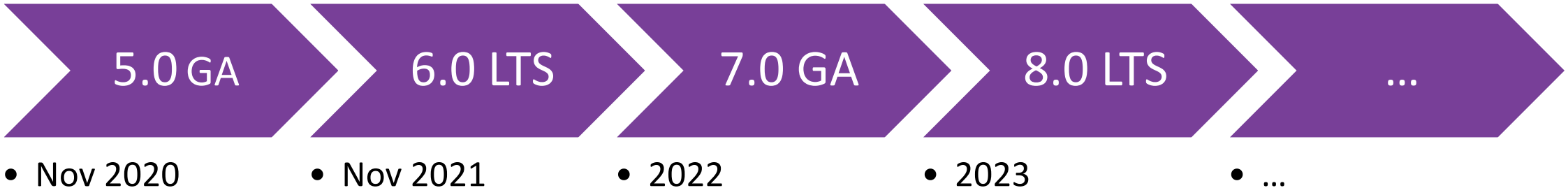
.NET Core – Free. Cross-platform. Open source

1.0	1.1	2.5	3.0	3.1
• 2015	• 2017	• 2018	• 2019	• 2019



- “We dropped ‘Core’ from the name to emphasize that this is the main implementation of .NET going forward”
- **– Microsoft**

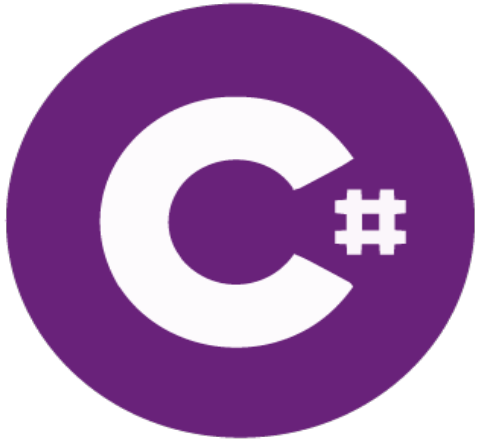
.NET Schedule



What is a Framework?

What is open source?

.NET Programming Languages



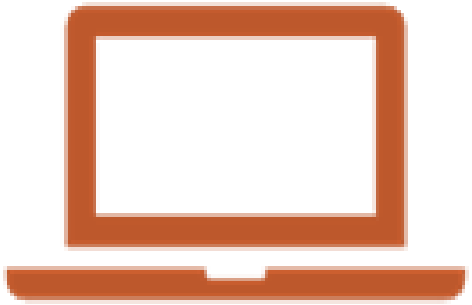
simple, modern, object-oriented, and type-safe

makes it easy to write succinct, robust, and performant code.

simple syntax for building type-safe, object-oriented apps.

Desktop Development with .NET

Windows Forms (WinForms)



Windows Presentation Foundation (WPF)

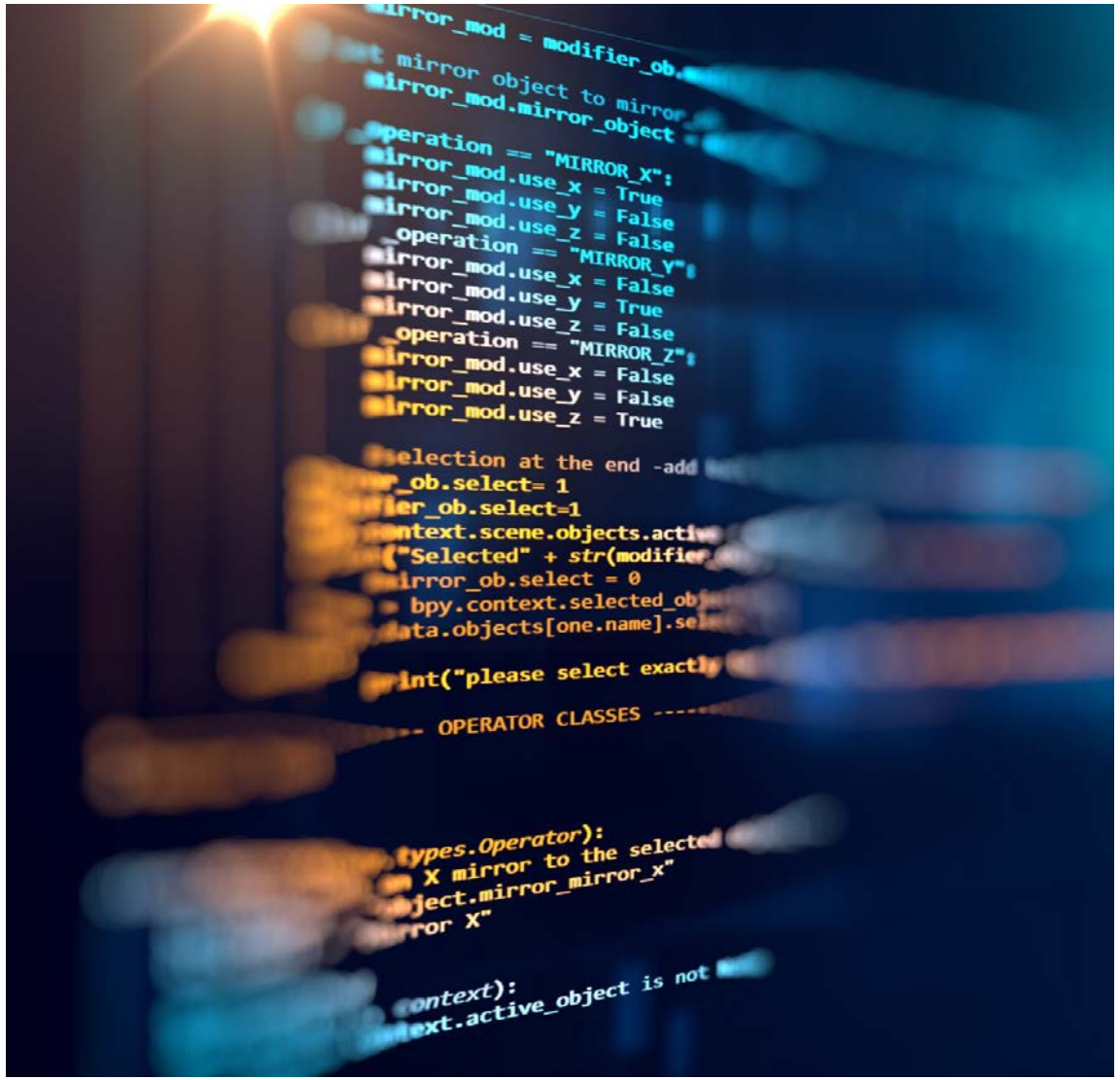
Universal Windows Platform (UWP)

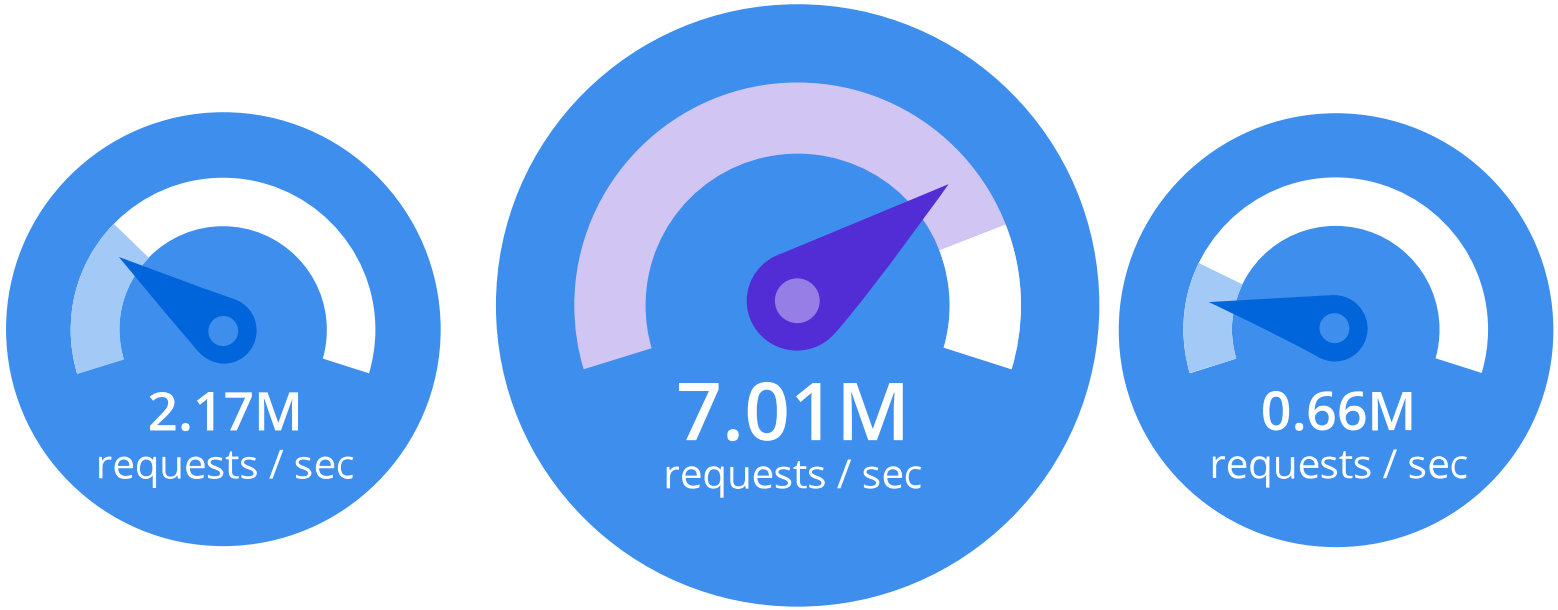
ASP.NET

Free.
Cross-platform.
Open source

Benefits of ASP.NET

- **Web Apps**
- **APIs**
- **Microservices**
- **Fast and scalable**
- **Build secure apps**
- **Blazor**
- **Active community and open-source**





Performance of ASP.NET

Data sourced from official tests available at TechEmpower Round 20.

Dell R440 Xeon Gold + 10 GbE

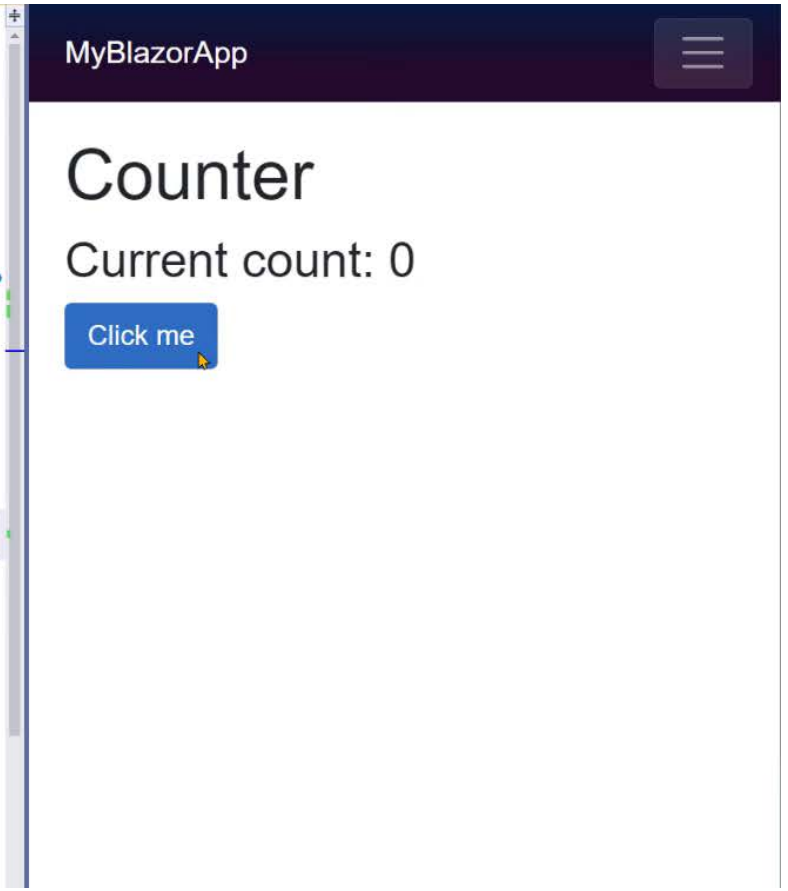
Blazor - Build client web apps with C#

```razor
@page "/counter"

<h1>Counter</h1>
<h3>Current count: @currentCount</h3>

<button class="btn btn-primary"
  @onclick="IncrementCount">
Click me
</button>

@code {
    private int currentCount = 0;
    private void IncrementCount()
    {
        currentCount++;
    }
}
```



Example of using Blazor

Xamarin

- **Mobile Apps**
- **Cross-platform**
- **Tooling**
- **Ecosystem**
- **Open-source and free**

slack
NATIONAL INSTRUMENTS
Kimberly-Clark
McKESSON
THE WORLD BANK
SIEMENS
CA
Crédito Agrícola
AVIVA
Schlumberger
Direct Energy.
DUPONT
3M
SOGETI
Dutch Tax Office
Coca-Cola
Bottling Co.
CONSOLIDATED
HALLIBURTON
APX
ThermoFisher
SCIENTIFIC
SENNHEISER
OUTBACK
STEAKHOUSE
CINEMARK
PEARSON
Honeywell
ARA
XACTWARE
MARS
Alaska Airlines
avanade
MRW

.NET ecosystem momentum

> 5M .NET developers In Visual Studio family	**#1** Most Loved Framework (2019&2020) .NET Core stack**overflow**	**Top 30** Highest velocity OSS project github.com/dotnet
Top 5 Language on GitHub C#	**> 10X** Faster then Node.js ASP.NET Core	**40%** New to .NET are students dot.net download survey

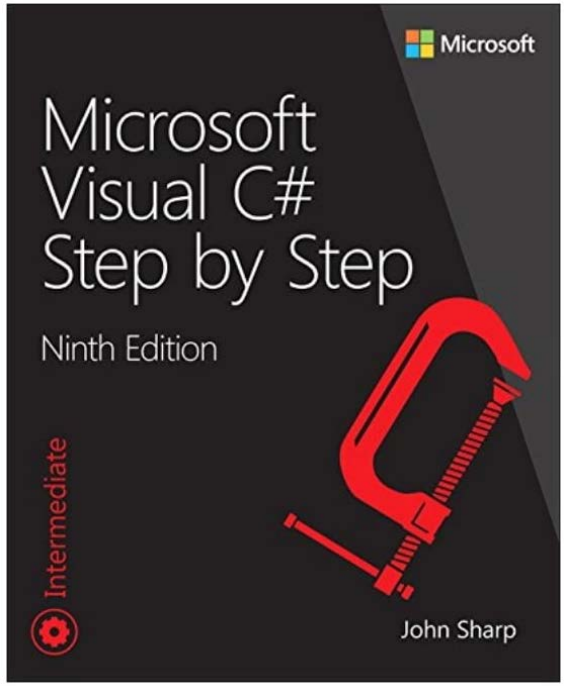
Source: octoverse.github.com; insights.stackoverflow.com/survey; techempower.com/benchmarks;

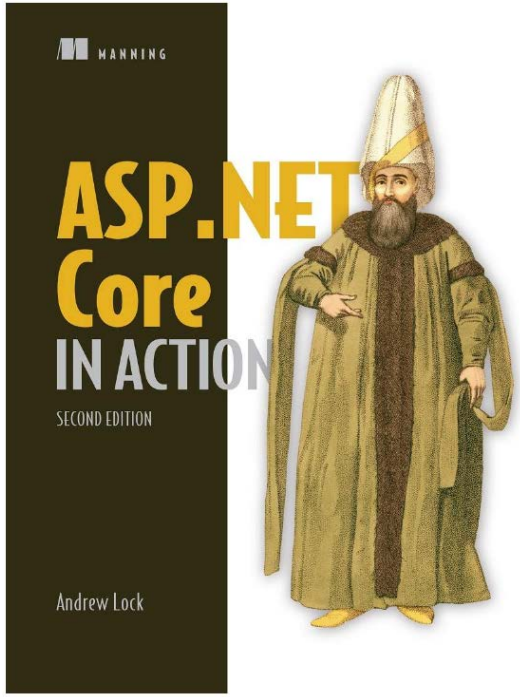
Developer Tools

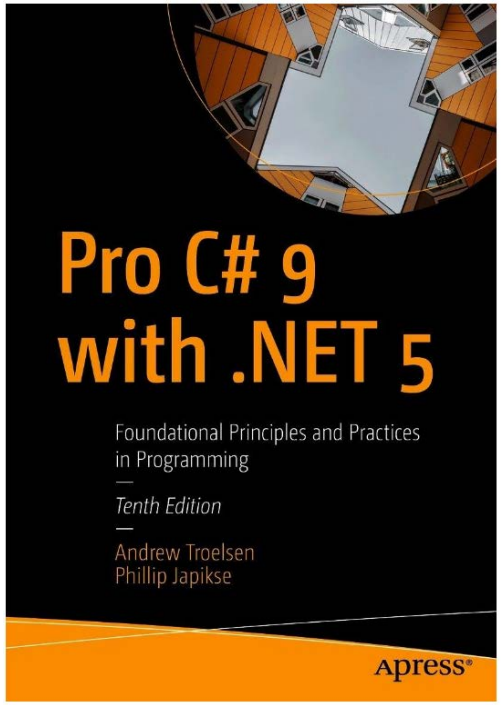
Visual Studio

Visual Studio Code

Rider







METANIT

metanit.com/sharp

Resources to study

C# courses by Silk Road Professionals