

.NET Conf

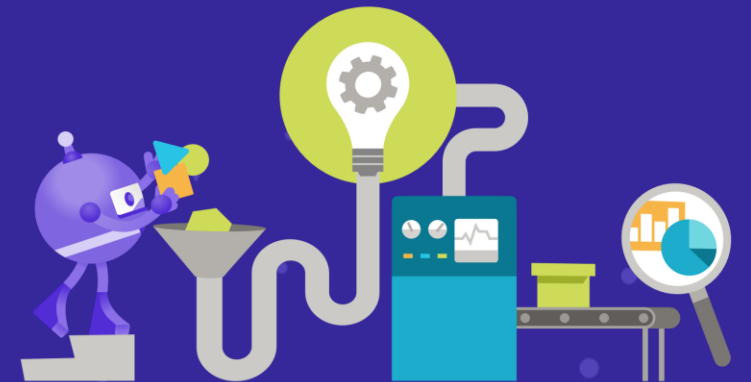
Focus on F#

July 29, 2021

focus.dotnetconf.net

F# Bonanza!

Don Syme & F# Community Contributors
@dsymetweets



Three Big Themes Today

Succinct

Robust

Performant

What is F# good at?

dot.net/fsharp

F# is good for **programming**

dot.net/fsharp

F# is good for **web programming**

dot.net/fsharp

F# is good for **cloud programming**

dot.net/fsharp

F# is good for **AI/ML/data-science
programming**

dot.net/fsharp

F# is good for **succinct programming**

dot.net/fsharp

F# is good for **correct programming**

dot.net/fsharp

F# is good for **performant programming**

dot.net/fsharp

F# is good for **programming**

dot.net/fsharp

F# get started

```
dotnet new -lang F#
```

```
dotnet build
```

F# tools are part of
the .NET SDK,
available everywhere



www.dot.net

F# for the web backend

```
dotnet new -i "giraffe-template::*"
```

```
dotnet giraffe
```

High perf, functional
server-side
programming



GIRAFFE

A functional ASP.NET Core micro
web framework for building rich
web applications.

github.com/giraffe-fsharp/Giraffe

F# for the web frontend (JavaScript)

```
dotnet new -i "Fable.Template::*"
```

```
dotnet new fable
```

```
npm install
```

```
npm start
```

You can use F# as a
JavaScript language



fable.io



websharper.com

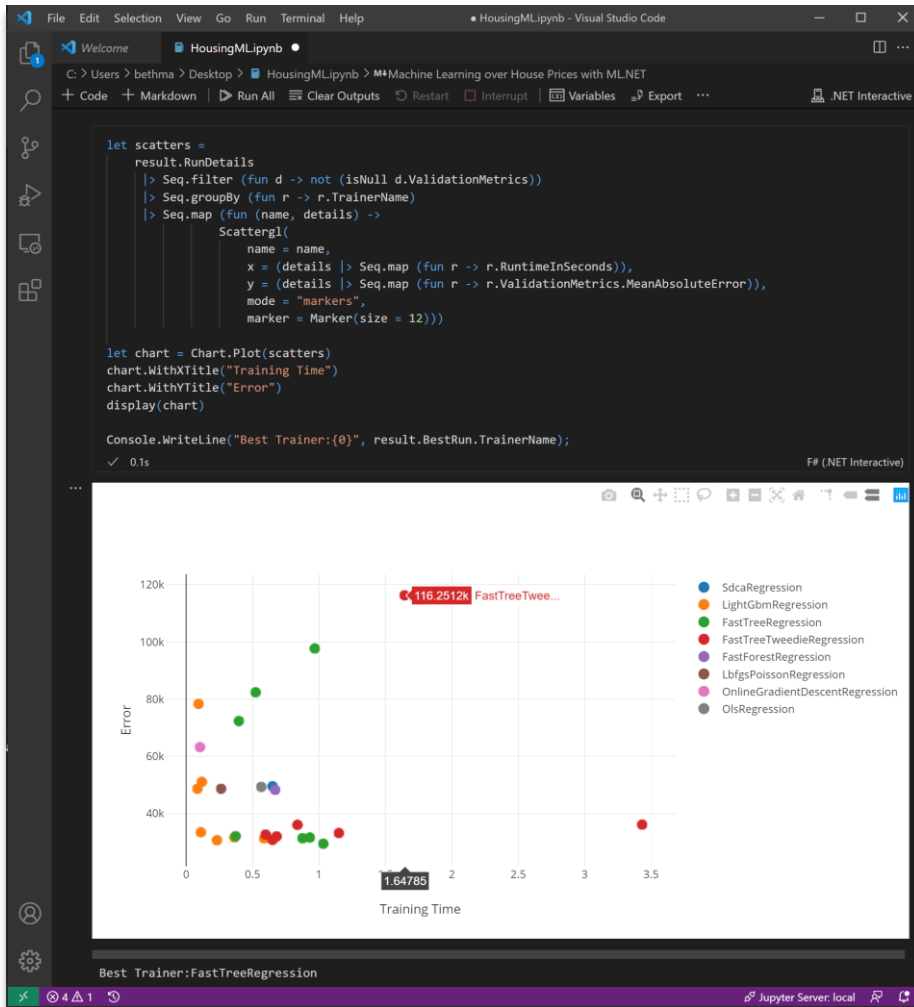
F# for the full stack with SAFE

```
dotnet new -i SAFE.Template
```

```
dotnet new SAFE  
dotnet tool restore  
dotnet run
```



F# for data science & ML



github.com/dotnet/interactive

```
#r "nuget:Microsoft.ML,1.4.0"
#r "nuget:Microsoft.ML.AutoML,0.16.0"
```

The image shows the Microsoft ML.NET website. The banner features the ML.NET logo and the text "An open source and cross-platform machine learning framework". Below the banner, there are four feature highlights:

- Built for .NET developers**: With ML.NET, you can use your existing .NET skills to easily integrate ML into your .NET apps without any prior ML experience.
- Custom ML made easy with AutoML**: ML.NET offers AutoML and productive tools to help you easily build, train, and deploy high-quality custom ML models.
- Extended with TensorFlow & more**: ML.NET allows you to leverage other popular ML libraries like Infer.NET, TensorFlow, and ONNX for additional ML scenarios.
- Trusted and proven at scale**: Use the same ML framework used by recognized Microsoft products like PowerBI, Microsoft Defender, Outlook, and Bing.

dot.net/ml



Version 1.58 is now available! Read about the new features and fixes from June.

Learning to code can be intimidating. We're here to help.



Python

Install the Coding Pack for Python which includes VS Code, your Python environment and libraries, and essential extensions.



Download for Windows



Java

Install the Coding Pack for Java which includes VS Code, the Java Development Kit (JDK), and other essential Java extensions.



Download for Windows



Download for macOS



.NET

Install the .NET Coding pack to set up a full development environment with VS Code, C#, F#, and .NET Interactive notebooks.



Download for Windows



Download for macOS



Other?

Coding in JavaScript, C/C++, HTML/CSS, or something else? Download VS Code on any platform and choose your favorite extensions.



Visual Studio Code (all platforms)

code.visualstudio.com/learntocode



F# for a
better world



Tejas Vishwanath

Co-founder & CTO, Chaldal

Supporting Supply Chains, Farmers and Refugee Camps with F#



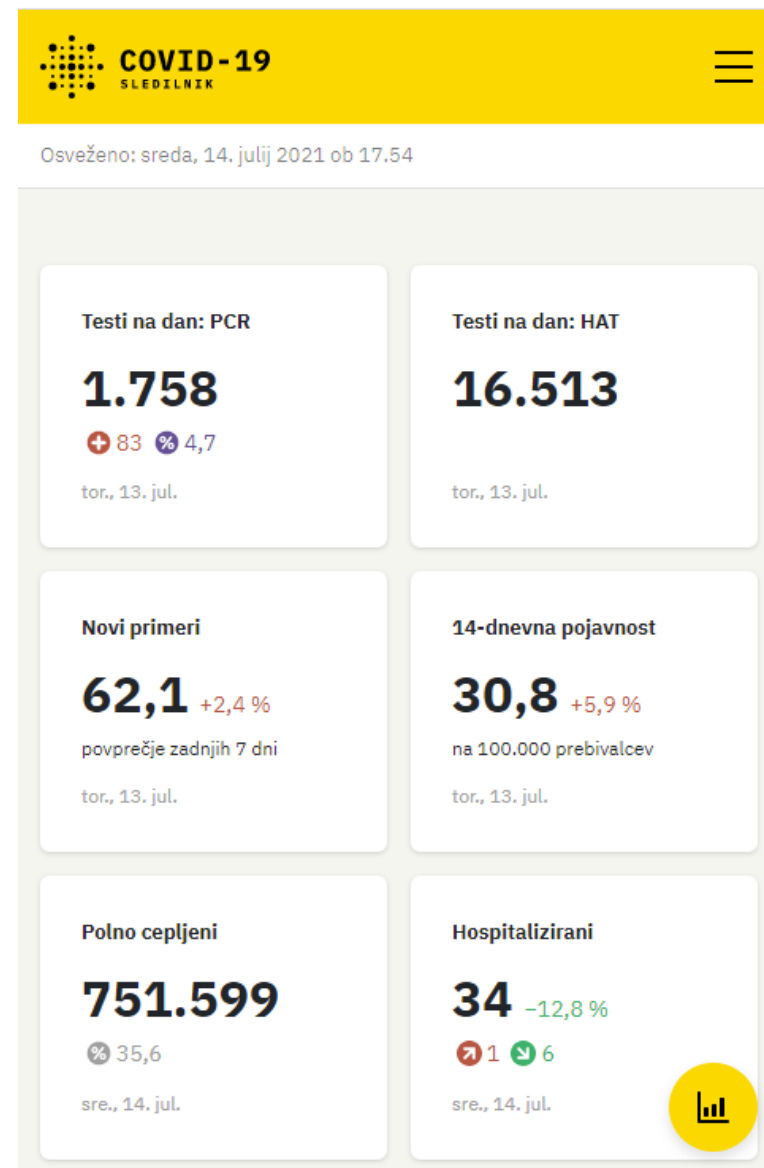
Kelsey Tripp

Director Engineering, Imperfect Foods

Reimagining grocery delivery for a kinder, less wasteful world

Built with F#

Covid-19 Tracker Slovenia



Built with F#

Electric Car
Charging
Stations





Leading and
growing F#
teams



Eduard Ostrovsky

Associate Director Engineering, Walmart Global Tech

Leading an Enterprise Team Using F#




Vagif Abilov

Senior Consultant, Miles AS

Full Stack in Cloud & Media with F#





“Succinct Like
Python, robust
and performant
like C#, Scala,
and Java”



Kevin Schneider

Researcher, TU Kaiserslautern

Using F# for Maths and Stats



Ambika Eshwar

Functional Programming Enthusiast, Rutgers

Getting Started with F#

Dr. Faisal Waris

AI/ML Researcher

Data Science with F#

DEMETRIX

Darren Platt

President, Demetrix

F# for Python Programmers in Biotech



Kit Eason

Principal Developer, Perpetuum Ltd. & Udemy Author

Learning and Teaching F#

Learning Resources

- dot.net/fsharp
- docs.microsoft.com/learn/modules/fsharp-first-steps
- udemy.com/course/fsharp-from-the-ground-up

Thanks for joining!

Ask your questions live on Twitter #dotNETConf

