Northern VA CodeCamp Fall 2017
is sponsored by

Full Stack TypeScript

MODERN WEB APPLICATION DEVELOPMENT

What.

I'm trying to free your mind, Code Camper, but I can only show you the door.

▶ *Full-Stack?*

Spoon.

There is no spoon.

- ▶ **TypeScript**
- ▶ **Node+Express**
- ▶ **Webpack**
- ▶ **Aurelia + CLI**
- ▶ **VS Code**

Steve Hartzog

TypeScript Developer. :)

A little about me:

▶ Love D&D, Euro-style Board Games

▶ Big fan of VS Code

▶ Considering ReactJS

▶ Own a Think Geek Potion LED

▶ Dark matter developer

  ▶ Node, AngularJS, Aurelia

  ▶ Classic ASP, ASP.NET, C#, VB

ASP.NET

Back in my day…

- **Server Architecture**
  - Database Server
  - Application Server

- ***N*-Tier Layers**
  - Data: C#
  - Business Logic: C#
  - Presentation: C#

- **In-Browser**
  - Data: Some AJAX
  - View: HTML, CSS, JavaScript

If it ain't broke?

Well, sort of.

▶ **Known quantities**

▶ **Very Expensive**

▶ **Complicated**

Modern Web Development

Wait. I don't need a heavy, separate server-side language?

- **Server Architecture**
  - Data Service
  - NodeJS

- **Application Layers** (all run in Browser)
  - Data Access
  - Business Logic in services
  - Presentation

Easy. Breezy.

Nice.

- ▶ **Sure, it's *different*…**
- ▶ **Simpler dev/deployment**
- ▶ **Better performance?**
- ▶ **One Language for Code**
- ▶ **NO Round trips for UI state changes**
- ▶ **Mobile Supported Out of the Box**

I'm a blue blood. Get it?

Server-Side Typescript

▶ NodeJS + Typescript

  ▶ ECMAScript 5 by default

  ▶ Use the "Node" module format

▶ Node Project Options:

  1) **Webpack** + tsc, Gulp + tsc

  2) TSC (from CMD, PS, BASH, etc.)

  3) TS-Node

  4) github.com/nodejs/node-chakracore

Client-Side TypeScript

▶ Browser + Transpiled Output

▶ App Project Options:

1) **Webpack** + tsc / Gulp + tsc
   • **Aurelia** / Angular CLI's (both Webpack)
2) TSC (from CMD, PS, BASH, etc.)

* Always deployed as JavaScript (ES5/2015)

Our choices today…

Client-Side TypeScript

▶ Aurelia CLI (Webpack)

Server-Side TypeScript

▶ Modify Aurelia CLI's Webpack task

aurelia-cli

Scaffolding, Building, Debugging

- ▶ Like most CLIs, it's installed globally
- ▶ VS Code Plugin
- ▶ Flexible build supports multiple tools:
  - ▶ LESS, SASS, Webpack, TypeScript, Babel
- ▶ Generator for common items
- ▶ Scaffolded app uses Webpack under the hood

Shia LaBeouf

LET'S BUILD A FULL STACK APP!

Further Information

▶ TypeScript: http://docs.microsoft.com/

▶ Aurelia Doc Hub

  ▶ http://aurelia.io/hub

▶ Other Examples

  ▶ Thomas Rognon: https://www.youtube.com/watch?v=vZetObIL4Kw

  ▶ Clayton Ray: https://www.youtube.com/watch?v=XqbBv1i9Yhc

    ▶ https://github.com/iamclaytonray/tes

Full Stack TypeScript
@ NoVA CodeCamp 2017.2

▶ https://github.com/SteveHartzog/CC-Fall-2017

Angular vs. Aurelia
@ AngularJS DC, June 7th, 2017

▶ https://github.com/SteveHartzog/Angular-vs-Aurelia

Introduction to Aurelia
@ NoVA CodeCamp 2017.1

▶ https://github.com/SteveHartzog/CC-Spring-2017

Thank you.

✉ steven.hartzog@gmail.com

🐦 @SteveHartzog

#dctech / @SteveHartzog

https://github.com/SteveHartzog

VS Code Plugin – Team Essentials
https://marketplace.visualstudio.com/items?itemName=SteveHartzog.team-essentials

Northern VA CodeCamp Fall 2017
is sponsored by