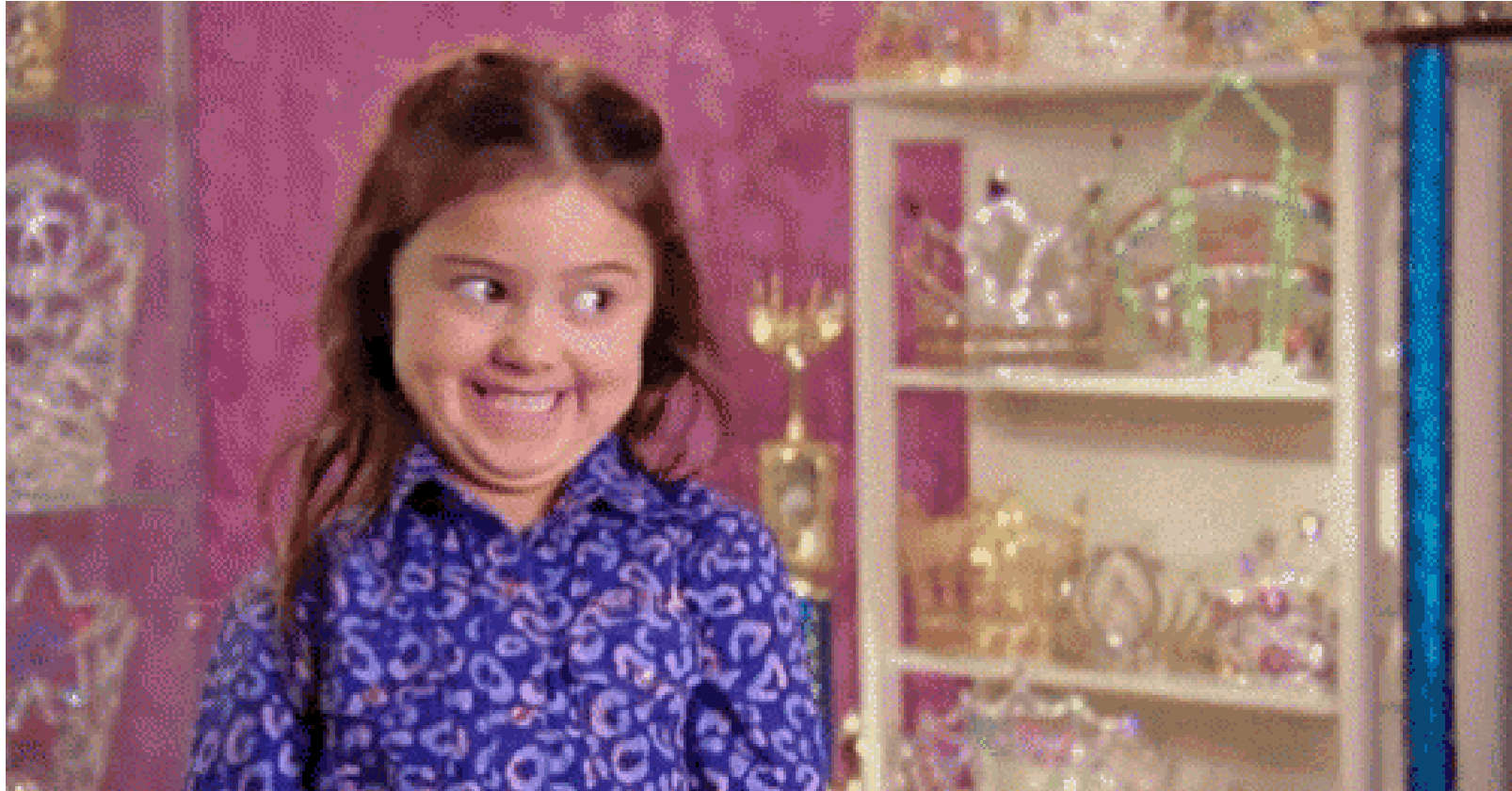


# What is Frontend?

**Mihai Dinculescu - Senior Client-side Backend Developer**

**Why am I even asking such a silly question?**



**We all know the answer...**

# ...it's a web page, obviously!



[shopping cart](#)[my account](#)[gift center](#)

[home](#)[dogs](#)[cats](#)[fish](#)[birds](#)[ferrets](#)[reptiles](#)[small pets](#)

**today's features****Nervous Piddlers**

Some dogs who pee just want to please.

**Service Cats**

These special cats help people in need.

**Animal Instincts:**

Can't live with parrots, can't live without 'em.

**Pet Food Terms**

Our expert tells you what the label really means.

**Pet Psychics?**

These people talk to the animals.

**Say What?**

If your ferret is deaf, she's not alone.

**Cage Rage**

What do you do if your bird hates his cage?

**I Want a Hamster**

Know this critter's needs before getting one.



### Celebrate our Anniversary

With 10% off Everything!

**Try this for dogs**



**Eukanuba Natural Lamb & Rice Adult Formula**

reg. price: \$23.15  
sale price: \$16.99

**Or this for cats**



**Premium Choice Scoopable**

reg. price: \$13.49  
sale price: \$9.99

**pets law****Neighborhood Menace**

No one deserves to feel threatened by an off-leash canine.

**Get It in Writing**

Buying a pet? A written contract can protect you.

**Equal Opportunity**

A "no pets" policy doesn't apply to guide dogs.

**pets vet****Ask the Vet:**

What's a hernia? And should my puppy have hers repaired?

**Seeing Inside**

Ultrasound imaging provides a window to your pet's health.

**Dr. Bobbie on Family:**

There's good reason to fear rabies.

**Pet of the Day**

**PetPlace.com**

For complete vet advice.



sock puppet stuff for everyone!

**associates program**

make money on your website

**pets.commitment**

join our commitment to helping animals

**AVMAF** AMERICAN VETERINARY MEDICAL FOUNDATION

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<awesome code slide here that doesn't work in pdf>

@LateNightSeth



**BOOM. EASY AS THAT.**

# And the best part?

**It's not even code!**

**HTML and CSS are not programming languages, they are silly markup!**

**And JavaScript? You don't really need that stupid language. You can do it better in code behind, on the server, using real programming languages!**



**No wonder everyone looks down on  
frontend developers!**

(or maybe it was just me)

At least they don't demand the pay of real software  
engineers!



This was all true 15  
years ago...

(when I was looking down on frontend developers)



**...but a lot has changed  
since then**

2006

# jQuery

What was 1,000 lines of JavaScript, became 10,000 lines of spaghetti

2007

**Any application that can be written in JavaScript, will eventually be written in JavaScript.**

*- Jeff Atwood, Author, Entrepreneur, Cofounder of StackOverflow*

@LateNightSeth

A medium shot of Seth Meyers sitting at a desk on a talk show set. He is wearing a dark blue suit, a white shirt, and a blue patterned tie. His hands are clasped in front of him on the desk. He has a slight, knowing smile and is looking directly at the camera. The background consists of large windows showing a nighttime city skyline with many lit-up buildings. The lighting is soft and professional, typical of a television studio.

**HE'S SUCH AN IDIOT**

# 2010

- Node.js (2009) & NPM
- Express.js (Server-side JS takes off)
- Backbone.js & AngularJS (The advent of SPAs)
- Backbone.js
- Three.js

What was 10,000 lines of spaghetti, became 100,000 lines of festering spaghetti

# 2011 D3.js

And charts and animations were never the same again...

2012

# TypeScript

And suddenly the un-manageable became sort of  
manageable....

(...or maybe we just got used to the pain)



2013

**React**

2015

**Redux**

And everyone went crazy about them...



**But we'll come back to React and  
Redux later...**

2016

# Apollo Server & Client

GraphQL APIs built and consumed 100% in JavaScript

2017

# WebAssembly

How do you optimize JavaScript? Just like you optimize  
Python :D

2018

**TensorFlow.js**



**Just think about it...**

RED  
TABLE  
TALK

This is crazy!

FEMINISM

**Maybe Jeff Atwood wasn't an idiot  
after all?**



**Anyways, back to React and Redux...**

**People loved React and Redux so much on the Web that  
they've created**

react-dom-stream (server side rendering)

React Native (Android & iOS)

React Native Desktop (OSX)

React Native Windows

react-blessed (terminals)

react-pdf

React Hardware (IoT)

ReactAframe (VR)

...

# Frontend is what it has always been

The presentation layer that the user interacts with

Technological advancements and constantly increasing client demands have made frontend more powerful but also more complex than ever.

In the modern applications the backend is closer to the frontend. More often than not a sizable chunk of backend is present on the client.

More and more different kinds of devices need a presentation layer. They all come with their own challenges.

# So what is frontend?

Web Apps (but not Pets.com - they went bankrupt)

Mobile Apps

VR Experiences

APIs (Hello Stephanie :D)

Explanations of Neural Network algorithms

LEDs controlled by a Raspberry Pi

Terminals

This presentation (btw, it's built with React)

...and much more...



In the past, we've used backend languages and libraries to produce presentation content. Now the trend is reversing.

Node.js, JavaScript, TypeScript, React, Redux, etc. are established technologies on the backend.

The Independence Carer and PwD apps that we're building are not just presentation layers. They contain a lot of logic on the client side for managing state, routes, events and side-events, notifications, caching, background jobs, etc.

# Demo

## Tensorflow.js

# **Demo**

## **World Draw**

# There are three takeaways

React, Redux and TypeScript are the holy grail, for now...

More things than ever are possible on the presentation layer.  
Dare to dream!

Frontend projects are becoming more complex and costlier to develop year by year. Please be careful what you promise to the clients.



**Just look at the gaming industry. Video games are mostly frontend, aren't they?**

(No, not really. There's a lot of invisible tooling around them)

## **Doom 1993**

~14 months of development, team of 7

## **Doom 2016**

~8 years of development, ~90 million USD

**Demo**

**A Day in the Life of Americans**



fin