## Reactive Programming with RxJS

#### What is Rx?



"The Observer pattern done right - ReactiveX is a combination of the best ideas from the Observer pattern, the Iterator pattern, and functional programming" - from reactivex.io

JavaScript, Java, .NET, Swift, and many more

### What is RxJS?

#### RXJS 5

Better performance
Better debugging
Compliance with the ES Observable Spec

## Reactive Programming

#### Observables

# Observer & Iterator Demos

# Observables = Observer + Iterator

#### Observables

Emits values in order like an Iterator
Push instead of pull
Observable ~ Observer's Producer
Observer ~ Observer's Listeners

## Demos

## Hot and Cold Observables

## Unit Testing

### Resources



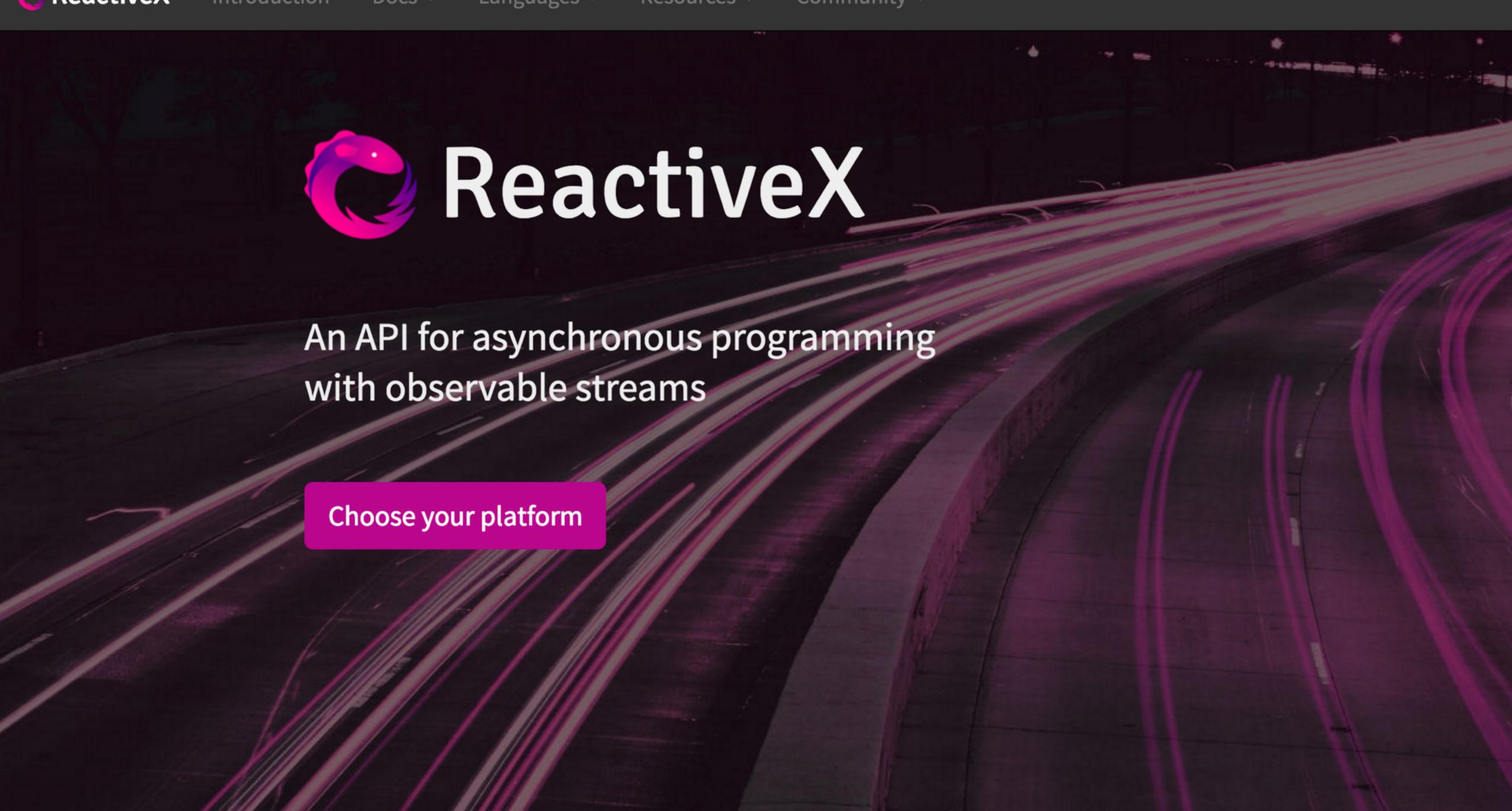
Introduction

Docs ▼

Languages **→** 

Resources **▼** 

Community -



#### RxMarbles

Interactive diagrams of Rx Observables

TRANSFORMING OPERATORS

<u>delay</u>

<u>delayWithSelector</u>

<u>findIndex</u>

<u>map</u>

<u>scan</u>

debounce

debounceWithSelector

COMBINING OPERATORS

combineLatest

<u>concat</u>

<u>merge</u>

<u>sample</u>

<u>startWith</u>

withLatestFrom

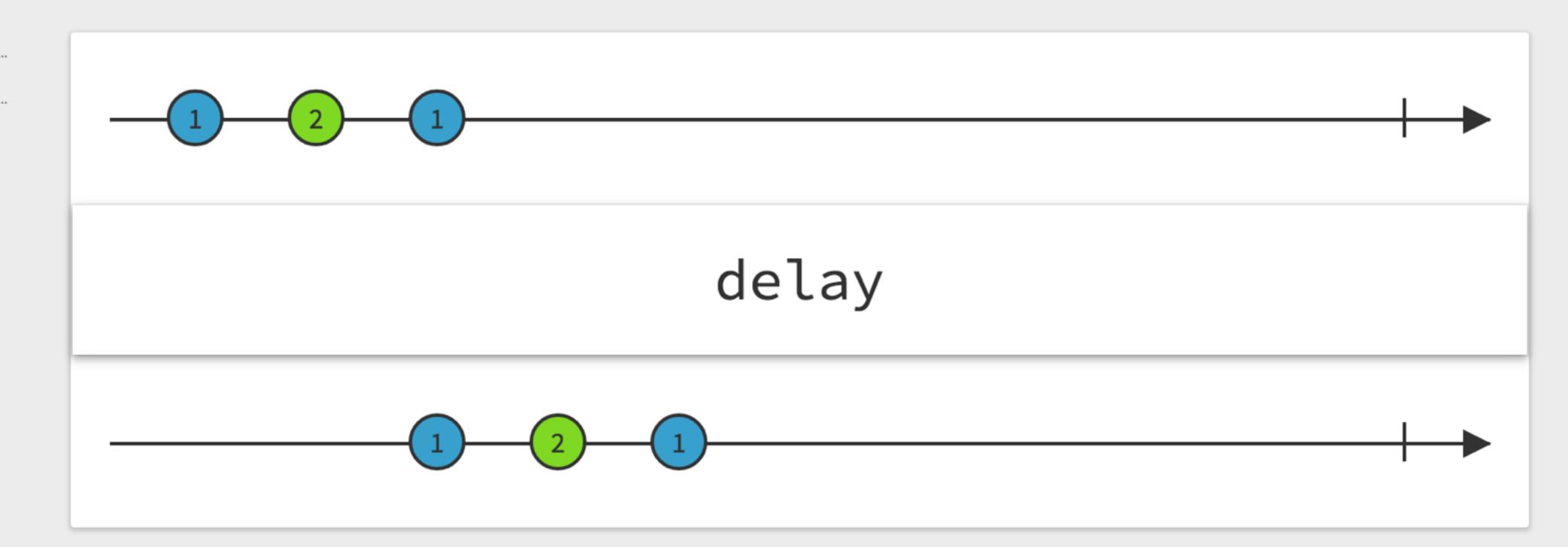
<u>zip</u>

FILTERING OPERATORS

<u>distinct</u>

distinctUntilChanged

<u>elementAt</u>



The Pragmatic Programmers

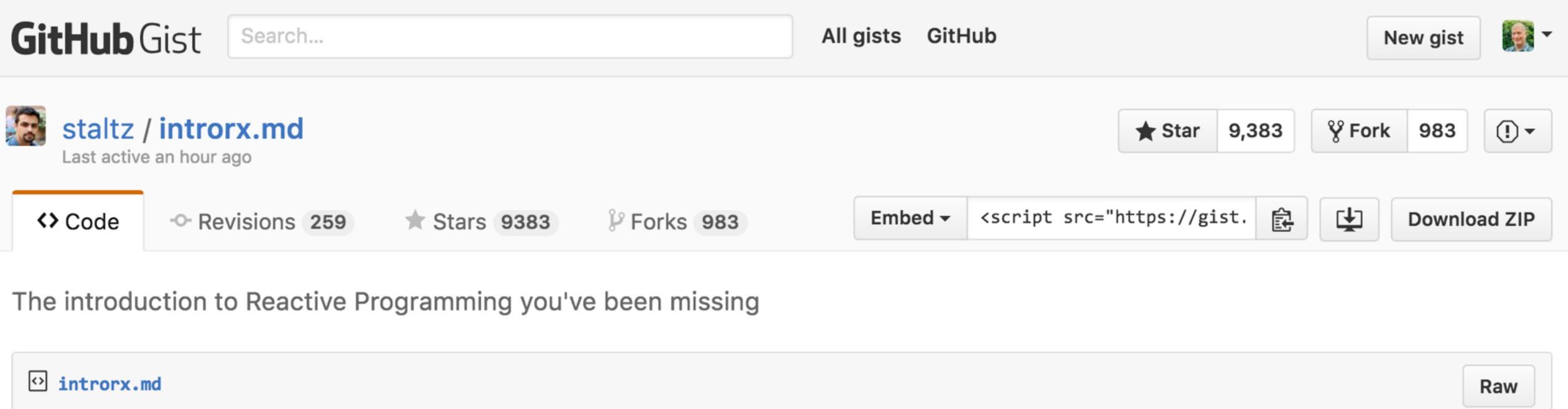
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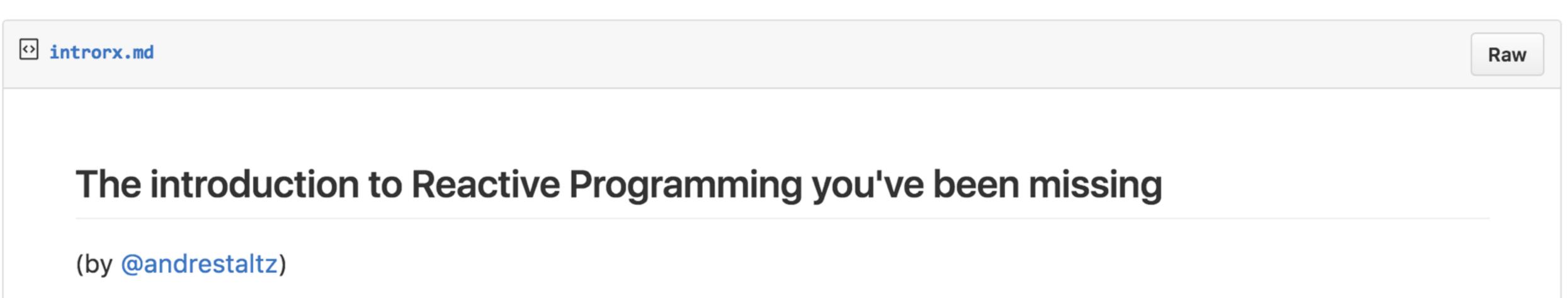
Untangle Your Asynchronous JavaScript Code



Sergi Mansilla

edited by Rebecca Gulick





#### This tutorial as a series of videos

If you prefer to watch video tutorials with live-coding, then check out this series I recorded with the same contents as in this article: Egghead.io - Introduction to Reactive Programming.





"The Reactive Extensions for JavaScript (RxJS) is a set of libraries for composing asynchronous and event-based programs using observable sequences and fluent query operators that many of you already know by Array#extras in JavaScript. Using RxJS, developers represent asynchronous data streams with Observables, query asynchronous data streams using our many operators, and parameterize the concurrency in the asynchronous data streams using Schedulers. Simply put, RxJS = Observables + Operators + Schedulers."

Brand new to RxJS and reactive programming? Check out this series of lessons from Jafar Husain.

#### **RXJS COURSES**







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#### Cycle.js Fundamentals



Cycle.js is a framework where your app is described as a simple function taking an event stream as input and outputting an even...

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#### Introduction to Reactive Programming



"Reactive" You've probably been hearing this word recently. Reactive Programming has you curious, and you want



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#### RxJS Beyond the Basics: Operators in Depth



Operators are the core building blocks for reacting to data in your JavaScript applications. In this course you will learn wha...

Anything by Matthew Podwysocki, Ben Lesh, Andre Staltz, Rob Wormald

#### Thanks!

James Churchill

Twitter: @SmashDev

GitHub: smashdevcode

https://github.com/smashdevcode/seattle-code-camp-2016