

Functional Javascript

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Who am I?

Currently

CTO/Co-Founder of FinTech startup in codename phase

Previously

Data analytic tooling and infrastructure

Web systems

Eg, everything from hot water heaters to 60 tb per day analytic systems

What is functional programming?

Programming paradigm

Alternative to imperative, object oriented, aspect oriented

Expressions/Declarations vs statements

Why Functional Programming

Re-usable components

Defusing time bombs

Abstraction

Terseness

Pieces of Functional Programming

Higher Order Functions

Simply, functions that take functions as arguments

Pieces of Functional Programming

Purity

Managing side effects, eg IO

Pieces of Functional Programming

Immutable data

Pieces of Functional Programming

Referential Transparency

Pieces of Functional Programming

Lazy Evaluation

Pieces of Functional Programming

Recursion

Functional Roots

Functional components in C

Progression from Procedural Programming

Pure functional Example

Joys of Haskell

On to JavaScript

JavaScript's functional Roots

Began as a Lisp

Parens are scary, so became more C like

On to JavaScript

Still very lisp like

Prototype inheritance

Category Theory

The math of Functional Programming

Lambda Calculus

Categories, Monads and Morphisms

Other References

<https://wiki.haskell.org/>

<http://raganwald.com/>

<https://brianmckenna.org/blog/>

<http://blog.tmorris.net/>

<https://lodash.com/>

<https://facebook.github.io/immutable-js/docs/#/>