Anything but JavaScript

Hi! I'm Kylie

Formidable

TypeScript

TypeScript
Developer
JAVASCRIPT
JS

What is it?

A superset of JavaScript
Provides optional static type checking
Designed for large scale, robust applications
... while still compiling down to JavaScript

Statically Typed

Dynamically Typed

Compared to JavaScript

```
class Button extends Component {
  render() {
    return (
      <button {...this.props}>{children}</button>
    );
  }
}

Button.defaultProps = {
  href: '',
  disabled: false
};

export default Button;
```

```
interface IButtonProps {
  href: string;
  disabled?: boolean;
  large?: boolean;
}

class Button = React.Component<IButtonProps> => {
  public static defaultProps: Partial<IButtonProps> = {
    href: '',
    disabled: false
  };

  public render() {
    return (
      <button {...this.props}>{children}</button>
    );
  }
};

export default Button;
```

Resources

- https://basarat.gitbooks.io/typescript/
- https://www.typescriptlang.org/play/
- https://typescriptcourses.com/typescript-fundamentals

ReasonML

What is it?

Statically typed

Functional

Based on OCaml

Compiles to JavaScript

OCaml

- Statically typed
- Pattern matching

Functional Programming

- Seperate concerns
- Avoid mutable objects
- Limit side effects

Compared to JavaScript

```
let getAnswer = (review, message) => {
  switch(review) {
    case 'Bad':
      return 'That is sad that you think: ' + message;
    case 'Neutral':
      return 'Okay';
    case 'Awesome':
      return 'Yes yes yes!';
  };
}
```

```
type review =
  | Bad(string)
  | Neutral
  | Awesome;

let getAnswer = review =>
  switch (review) {
  | Bad(comment) => "That is sad that you think: " ++ comment
  | Neutral => "Okay"
  | Awesome => "Yes yes yes!"
  };
```

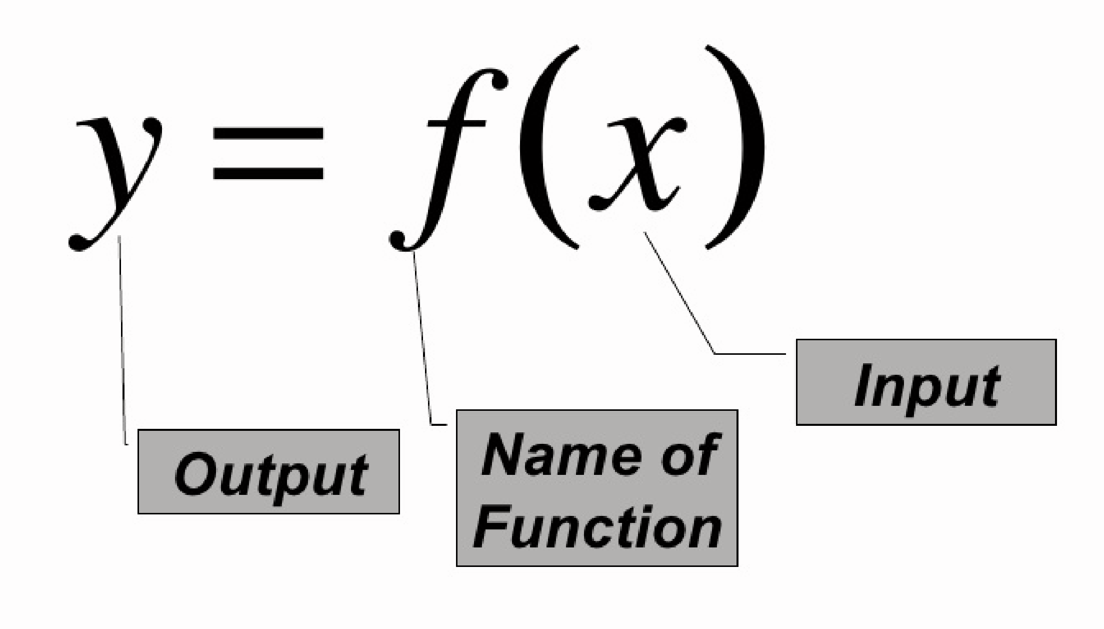
Resources

- https://reasonml.github.io/docs/en/what-and-why
- https://jaredforsyth.com/posts/a-reason-react-tutorial/
- https://egghead.io/courses/get-started-with-reason

Machine Learning

What is Machine Learning, anyway?

Think: Function Notation



$$y = f(x)$$

Output

Name of Function

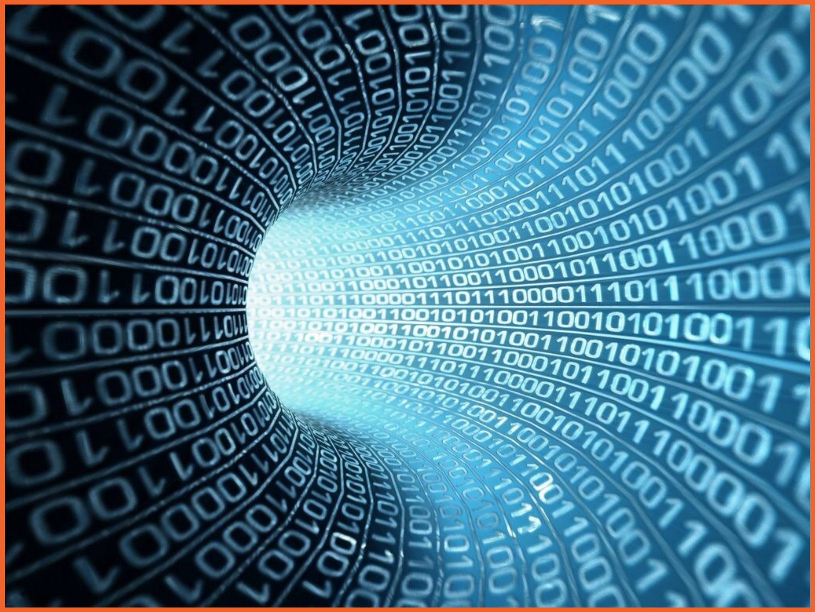
Input

Supervised Learning

- Humans
- Linear Regression
- Classification

Unsupervised Learning

- Great for big data
- Exploratory analysis
- Anomaly detection
- Clustering



TensorFlow.js

Resources

- https://botnik.org/
- https://github.com/BrainJS/brain.js
- https://github.com/tensorflow/tfjs-examples
- http://caza.la/synaptic/#/

Thank you!

`kale-stew.github.io/anything-but-js`