Data Visualisation with React

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Webinar Contents

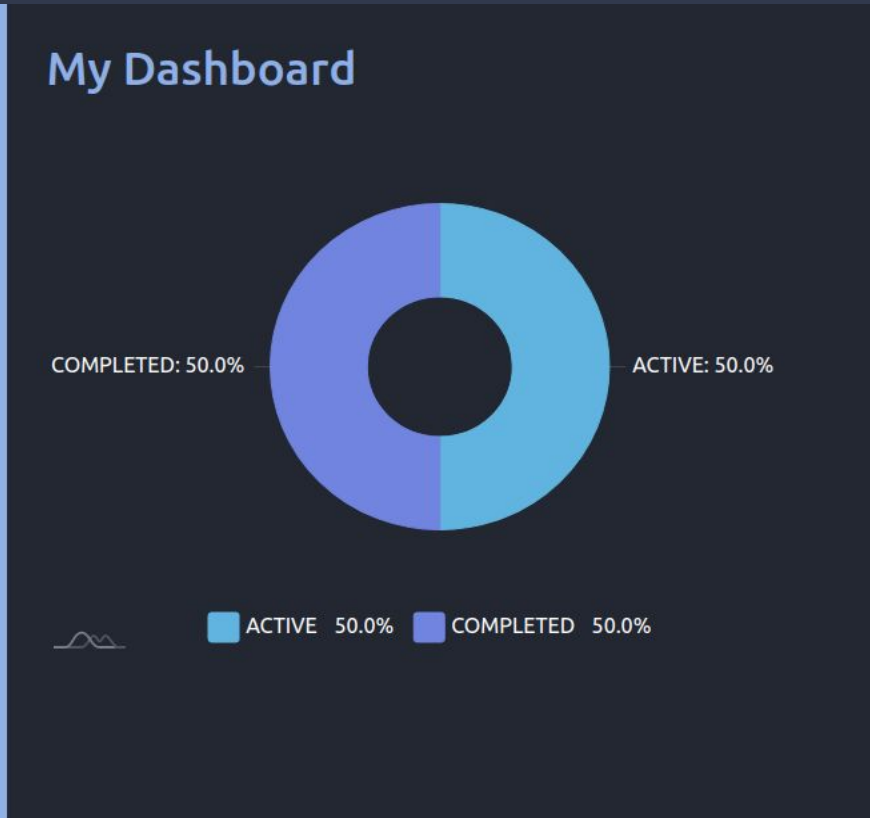
REACT

- What is React
- Why should we choose React
- Stateful vs Stateless Components
- Working with components and reusing them

DATA VISUALIZATION

- Interpreting data
- Why data visualisation
- Types of data visualisation
- Principles of data visualization
- Charting libraries available

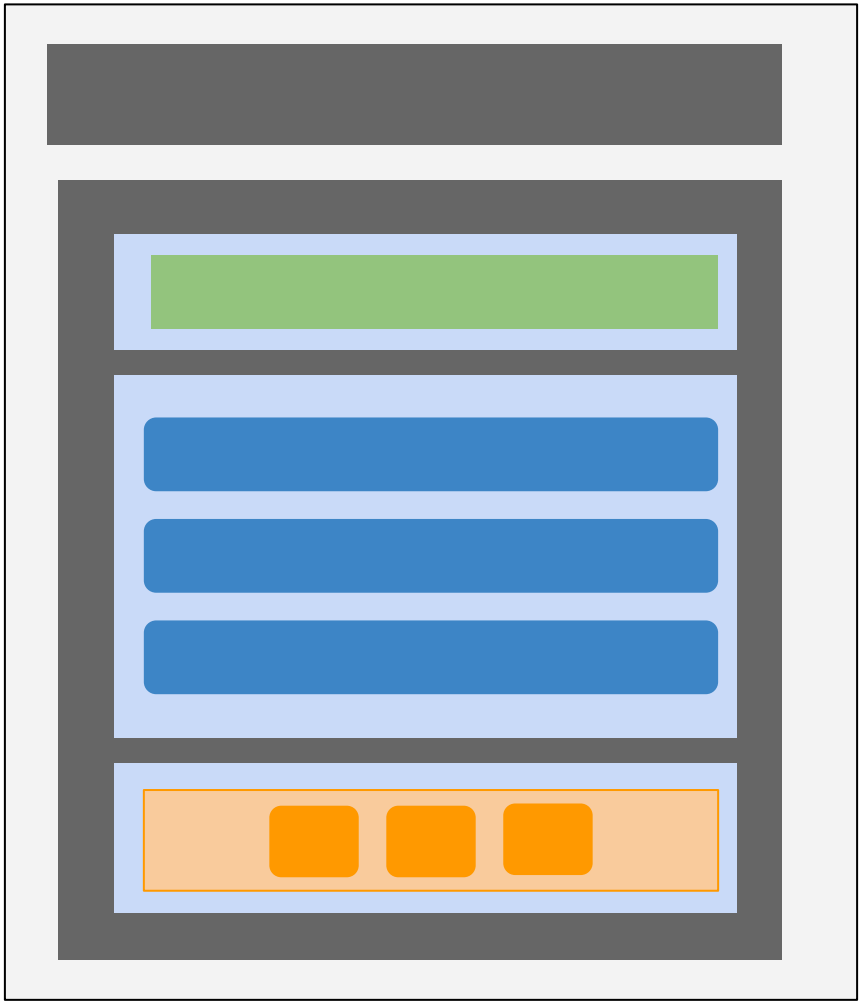
What are we building



IDE – VSCode

Extensions:

- Auto Close Tag - Jun Han
- Bracket Pair Colorizer - CoenraadS
- Prettier - Code formatter Esben Petersen
- Eslint - Dirk Baeumer
- Format on Save - True



What is React ? & Why React ?

WHAT

A Javascript library for building user interfaces

WHY

React helps by making the whole UI state management a non issue.It help us lets us focus on the business logic.

React is managed by a bigger community, which means a bigger ecosystem.

Components in React

```
function Hello (props)  {

    return <h1> Hello at {props.name} </h1>

}
```

```
Class Hello extends Component {
    // constructor // this keyword
     render() {
        return <h1> Hello at {props.name} </h1>
     }
}
```

Stateful vs Stateless

STATEFUL

If a component is managing state no matter if it's using class based approach with state property or the usestate hook it is a stateful component.

a) They are also called as **Smart** components or **Container** components

STATELESS

No internal state management is done in these components

They are also called as

a) **Dumb** components as they have no internal state logic.
b) **Presentational** components because they present or output something in a structured way.

What is data visualization?

Conveying a story or an idea as efficiently as possible.

It is the mapping of values to visuals to creating stories for our audience

Types of data

Quantitative

- It is the numerical data, it can be continuous or discrete

Categorical

- It is the nominal data.
- It can be geographical data as well.
- This data can have numerical categories but might not have necessary mathematical equation

Charting Libraries

A chart is a graphical representation of data, in which data are represented as symbols

Javascript libraries : amcharts, chart.js, recharts, fusioncharts, etc

D3.js

WebGl, Canvas, SVG

Types of chart

a) Bar Chart - Highlights individual values, supports comparison and can show ranking and deviation
b) Pie Chart - Shows part to whole relationship and best suited for one category, not ideal for making comparison
c) Line Chart- Shows overall change and patterns over equally spaced time intervals

More:

Bubble chart, Scatter chart, Stacked Bar chart etc etc

Where to go from here:

a) Add a creation date and due date to each todo
b) Try to show this additional data in graph, to track number of todos missed in each week/quarter/month
c) Experiment with d3.js library.
d) Understand various other elements in a chart

THANK YOU