

GAMAKA

Artificial Intelligence Solutions

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Module 6: React JS

Duration: 60 hours with hands on tutorials

Live Projects & 60 assignments.

Course Description:

React is the exciting web framework from Facebook. It runs Facebook.com, and a host of other high-performing web applications, and is designed to facilitate three goals: performance, agility, and scale.

React is a component based front-end library that allows you to build applications out of a tree of small, testable, modular components. It features a diffing engine that makes DOM manipulation incredibly fast, faster even than vanilla DOM scripting.

Flux is an architectural pattern characterised by one-way data flow, immutability and message passing. We create a central data store, and then pass messages to it to tell it how to change. Changes then flow into the component tree, updating the DOM. It can seem intimidating at first, but quickly becomes natural. In this course, we use Redux for Flux, which is currently the best practice solution.

Our React training course is practical. You will, right from day one, be building components and applications with real-world applicability. We will build against tests from the end of day one, and design sensible, component-based solutions using best practice. You will also gain an awareness of the wider JavaScript toolchain ecosystem, including Node, Karma, and Webpack.

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Getting started with React

- What is ReactJS?
- Installation or Setup
- Hello World with Stateless Functions
- Absolute Basics of Creating Reusable Components
- Create React App
- Hello World
- Hello World Component

Components

- Creating Components
- Basic Component
- Nesting Components
- Props
- Component states - Dynamic user-interface
- Variations of Stateless Functional Components
- setState pitfalls

Using ReactJS with TypeScript

- ReactJS component written in TypeScript
- Installation and Setup
- Stateless React Components in TypeScript
- Stateless and property-less Components

State in React

- Basic State
- Common Antipattern
- setState()
- State, Events And Managed Controls

Props in React

- Introduction
- Default props
- PropTypes
- Passing down props using spread operator
- Props.children and component composition
- Detecting the type of Children components

React Component Lifecycle

- Component Creation
- Component Removal
- Component Update
- Lifecycle method call in different states
- React Component Container

Forms and User Input

- Controlled Component
- Uncontrolled Components

React Boilerplate [React + Babel + Webpack]

- react-starter project
- Section 8.2: Setting up the project
- ReactJS with jQuery

React Routing

- Example Routes.js file, followed by use of Router Link in component
- React Routing Async
- Communication between Stateless Functional Components

React.createClass vs extends React.Component

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- React.createClass vs extends React.Component
- Create React Component
- "this" Context
- Declare Default Props and PropTypes
- Mixins
- Set Initial State
- ES6/React "this" keyword with ajax to get data from server

React AJAX call

- HTTP GET request
- HTTP GET request and looping through data
- Ajax in React without a third party library - a.k.a with VanillaJS

Communication Between Components

- Child to Parent Components
- Not-related Components
- Parent to Child Components
- Stateless Functional Component

Performance & Rendering components

- Performance measurement with ReactJS
- React's di algorithm
- The Basics - HTML DOM vs Virtual DOM
- Tips & Tricks

Setting Up React Environment

- Simple React Component
- Install all dependencies
- Configure webpack
- Configure babel
- HTML file to use react component
- Transpile and bundle your component

Using React with Flow

- Using Flow to check prop types of stateless functional components
- Using Flow to check prop types

JSX & Forms

- Props in JSX
- Children
- React Forms n in JSX
- Controlled Components

User interface solutions

- Basic Pane
- Panel
- Tab
- PanelGroup
- Example view with `PanelGroup`s
- Keys in react
- Using ReactJS in Flux way
- Data Flow

Keys, React, Webpack & TypeScript installation

- webpack.config.js
- tsconfig.json
- My First Component
- Keys in react