

# Comparison on ReactJS And React Native

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**Abstract-** React and React Native were developed by Facebook, and they have gained a substantial following very quickly. React, often known as ReactJs, is a JavaScript package used to build single-page web applications. In ReactJS, each component keeps track of its own state and is put together to create user interfaces. A lot of data may be easily provided to the app using JavaScript's concept of components in place of templates, keeping the state off of the DOM. There is also a server side rendering option for Node React. In addition to developing web applications, React Native may also be used to develop mobile applications.

## INTRODUCTION:

Single-page web apps are made using the open-source React JavaScript library, also known as ReactJS. For building the UI (front end) of web and mobile apps, it is one of the most popular libraries. It was developed in 2011 with Facebook's assistance, and its popularity has increased ever since. Lightweight, adaptable, and user-friendly mobile and online apps are possible with React. Because of it, they can also automate the design process. By utilizing its advantages, ReactJS developers can design anything they want without adhering to certain restrictions.

React Native is used to create mobile apps for Android, iOS, and Windows. React Native is easier to understand if you are familiar with JavaScript and React's fundamentals. React Native is used to build powerful mobile user interfaces using declarative components using only JavaScript. Both React and React Native are widely used in web and mobile applications and are leading the industry. Your user won't be affected by the difference between web apps and websites, though.

React Native enables the development of cross-platform software for Windows, Android, and iOS. Consequently, there is now another framework for building cross-platform applications. Actually, React Native uses the fundamental abstraction of React.Js. Only the components of the library, though, are special. ReactJS and React Native are fundamentally different from one another while having a similar nature. However, each technology is a master in its own discipline. React Native app development costs are also influenced by the functional requirements.

## Why Learn React -

React usage advantages Now that you know how this revolutionary library came to be, let's look at react advantages and why you should use it for your web application projects: Developers Can Learn More Easily: Selecting a library that is simpler to understand and use is one of the key issues that developers have. For developers who are familiar with JavaScript, React is simple to understand. ReactJS should therefore be your best option if you have a team of developers who are extremely knowledgeable about JavaScript. However, React can be a good place to start even if developers don't know JavaScript. React has a smooth learning curve compared to Angular.

**Developers can reuse components thanks to React:** Your application in React consists of components. Creating wrapper components over smaller components like buttons, check-boxes, drop-down menus, and other visual elements is ideal. You will also have a single root component and a number of hierarchical components as you continue to write the higher-level wrapper components. It should be obvious by now that each React component has its own logic. Therefore, you are good to go if you want to reuse the button component through your app. I have a good feeling that everyone wants their project to be reusable.

**It has a strong developer tool ecosystem and is well-established:** React is made up of a thriving ecosystem. Developers can construct a web app more quickly and without having to start from scratch by choosing from a large selection of pre-made and editable charts, graphics, documentation tools, and other elements. Developers may create wonderful things with the aid of this awesome selection of ReactJS development tools and tutorials.

## The Negative: ReactJS

### 1) JSX

JSX (JavaScript XML) is used by React. Developers can write HTML code in React by using the extension or plugin known as JSX. As a result, many developers dislike or prefer JSX documentation and believe that it is challenging for beginners to understand.

### 2) Regular Library Updating

Every developer's top complaint is that the React library's frequent modifications severely slow down the development of apps. To make the code more or less resilient, React advancements are now mostly used for libraries and other changes.

### 3) Integration of Third Parties

React has a few native modules despite providing many third-party modules and plugins. Developers can integrate complicated JSX code with HTML and CSS code using third-party integration..

**React Native:**

**1) Shortage of Custom Modules**

If an application is loaded with many features, it will decrease the development speed due to a shortage of native modules and dependency on third-party libraries. Moreover, creating a custom module will create three individual codebases (RN, iOS, Android) instead of only one.

**2) Frequent Updates**

Developers are constantly working towards the betterment development of React Native. It always comes up with new ported native components, enhanced performance, and improved custom components.

However, updates are not a minus point here. But here, as compared to a highly evolved cross platform app development framework, developers must consider this factor.

**3) Load Time**

Application load time is a critical issue that every React Native developer faces. It's because of the JavaScript thread that it takes a lot of time to deploy.

**Why Do Developers of JavaScript Use React S?**

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**Outcomes –**

- **React helps you reach mobile users:** Prior to learning React Native, I first learned React for the web. Not as difficult as I had imagined, switching from React to React Native. The ideas of web vs. mobile that I found challenging, in particular things like styling, routing/navigating, setup, design, etc., were the significant obstacles. In other words, designing and building a website is considerably different from designing and building a mobile site. The main obstacle wasn't technology per .
- **You save time with React:-** Writing code that is self-contained and compatible with the wider code set is necessary for efficiency. And from my experience with JavaScript frameworks, React is the only one that encourages productive labor. It's simple to create utility functions or other services in this vein as you're already working with a number of components that connect with one another. You can therefore use this architectural pattern to other frameworks and libraries. To put it another way, the modular design of React enables you to alter a component just once and it will update in real time.
- **With React, you can utilize any technology:** You may use this library with pretty much any other framework of your choice because React is quite versatile in terms of how it renders a view. For instance, many developers will combine React and NodeJS to make use of server-side rendering. It allows you the freedom to use any additional technology that your project requires while still writing incredibly quick and clean code.

**Here's the main difference between ReactJS and React Native:**

- React JS is used to build the user interface of web applications (that is, apps that run on a web browser)
- React Native is used to build applications that run on both iOS and Android devices (that is, cross-platform mobile applications)

**Comparison between React and Native:**

Parameters	React	React Native
Founding Year	2013	2015
Languages used	JavaScript	JavaScript,rendered with native
OS Type	Any	Any
Server used	Node	Local-Host is used

**Conclusion:**

React and React Native, its siblings, should now be clearer to you. They are different in terms of the platforms for the finished goods, but they are comparable in terms of the development process. Actually, if you are proficient in the React or React Native frameworks, learning another framework will be easier. However, in order to create a React Native application, you must be familiar with React. However, things don't end there! React Native only offers a very limited degree of support for native applications, therefore more native applications need to be thoroughly understood. Therefore, if you want to develop a web or mobile application, you can hire React or React Native developers. They will improve your development in a few key ways going forward. ReactJS is a great addition to projects that require stunning user interactions, component reuse, or wild animations. Having said that, it's a strong UI library to create projects for small, medium, and even large-scale businesses. That is why so many businesses rely significantly on React to achieve their long-term commercial objectives. ReactJS benefits and drawbacks may be succinctly summarized in three words: non-risky, responsive, and sophisticated. This particular library's major goal is to "build large-scale applications with data that changes repeatedly over time," and it successfully takes on the challenge.

It gives programmers the opportunity to use a virtual browser (DOM) that is faster and more streamlined than the actual one. In addition, it makes it simpler to create interactive user interfaces, supports JSX has a component-based architecture, and does a lot more. It is a logical solution for both startups and businesses due to the confluence of the aforementioned elements. React is a challenging and important technology to learn, so it would be beneficial to increase personal understanding by additional research.

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Here are some references that can be used for further reading on the comparison between Amazon and proposed e-commerce platforms:

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