

# React

Learn about React, including what it is, why you might use it, and how it fits into the Gatsby ecosystem.

## What is React?

React is a code library for building web-based user interfaces. It's written using JavaScript, one of the programming languages used to create web pages.

Facebook first released React in 2013. The company still maintains the project, along with a community of contributors. It's free to use and open source under the terms of the MIT License.

Where publishing tools such as WordPress and Jekyll rely on a system of template files to create a UI, React uses components. Components are contained chunks of JavaScript, CSS, and HTML or SVG that can be reused, shared, and combined to create a website or application.

Components may be purely presentational. For example, you might create a **Logo** component that's just an SVG image. Or a component may encapsulate functionality. An **InputBox** component might include an input control, a label, and some simple validation.

Components are also *composable*, which is a fancy way of saying that you can use multiple child components to create a parent component or view. This is how you will build Gatsby pages and templates.

React components respond to changes in *state*. In React, *state* is a set of properties and values that determine how a component looks or behaves. State can change in response to user activity, such as a click or key press. State can also change as the result of a completed network request. When a value in a component's state changes, the component is the only part of the UI that changes. In other words, React can update part of a page or an entire view without requiring a full page reload.

Gatsby bundles React, webpack, GraphQL, and other tools into a single framework for building websites. With Gatsby, you get a head start on meeting your SEO, accessibility, and performance requirements. Rather than installing and configuring a development environment from scratch, you can install Gatsby and start building.

### **Learn more about React**

- [React Official website](#)