Learn what webpack is, how it works, and how Gatsby uses it to accelerate website development.

What is webpack?

webpack is a "static module bundler," or software that collects chunks or modules of JavaScript and compiles them into one or more optimized bundles. webpack is one of the core software packages that underpins Gatsby.

webpack works by creating a *dependency graph*. In other words, webpack determines which modules depend on other modules to make your site work. A *module* is a chunk of code that encapsulates some functionality. It may be as small as a single JavaScript function, or it may be an entire library such as React.

webpack determines dependencies from the contents of `webpack.config.js` . `webpack.config.js` can contain one or more *entry points*, which tell webpack which file or files to use as the starting point (or points) for a dependency graph. See the following example.

```
module.exports = {
  entry: "/scripts/index.js",
}
```

webpack processes JavaScript and JSON files by default, but you can add support for CSS and media files with additional software and configuration. For example, Gatsby ships with its own `webpack.config.js` file that supports global CSS files, component-scoped CSS modules, and CSS-in-JS.

You can also use webpack to optimize how CSS and JavaScript are delivered to the browser. webpack supports a feature known as *code splitting*. Code splitting allows you to divide your code across a few bundles that are loaded as needed or as requested. Gatsby is already configured to use this feature. You do not have to do any additional set up to reap the benefits.

If you want to add support for features such as Sass/SCSS, that Gatsby does not support out of the box, you can also add a custom webpack configuration, or use one of the Gatsby plugins contributed by the community.

Learn more about webpack

- webpack official site
- Custom Configuration from the Gatsby Docs