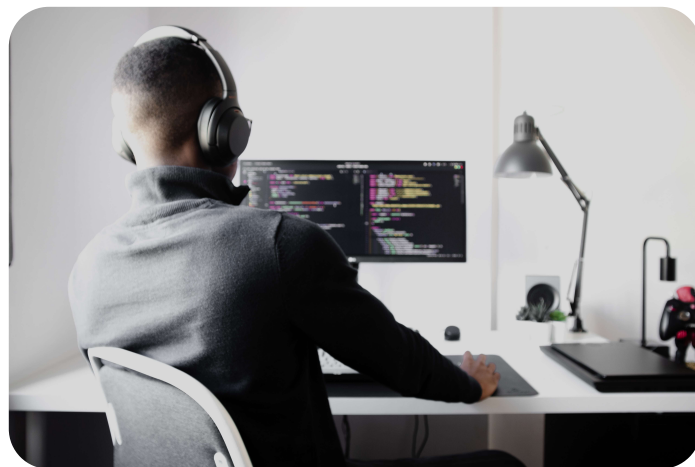


Why Aspiring Web Developers Should Learn Node.js

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August 2, 2021



You've heard about [Python](#) and [Java](#)—when it comes to web dev skills, these two are arguably the most popular in the world—but another valuable skill for any aspiring web developer to have in their toolkit is [Node.js](#).

Node.js makes building scalable network applications simple and fast. That's why it's the chosen tech stack for some of the biggest applications on the web, like Paypal, Uber, and Netflix. It also gives a big leg-up to web developers wanting to be well-versed in all parts of a web application.

Here's what you should know about this powerful tool and why it's so valuable for beginning web developers to be in the 'node' about Node.js.

What is Node.js?

Most people think Node.js is a programming language or a framework, but in reality, it's neither. Node.js is a JavaScript runtime, or a software that's designed to execute other software. Specifically, Node.js is an open-source, cross-platform backend software built on Chrome's V8 JavaScript engine that executes JavaScript code outside of a browser.

Node.js uses a single-thread, event-driven I/O model instead of the more common thread model, which makes it lightweight and highly efficient at building real time applications (RTAs). This also means Node.js uses fewer lines of code than other processes.

Unlike other software, Node.js functions via event looping, which allows developers to use non-blocking I/O that can manage multiple requests. Event looping begins after an input script is executed, and Node.js exits an event loop when there are no more callbacks to perform. These kinds of processes allow developers to do more while using less memory and resources.

One thing to keep in mind about Node.js is that it cannot be used for heavy computation, but it can do a darn good job handling a myriad of communications at once and it's exceptional for scalability.

What can you build with Node.js?

Node.js is incredibly versatile. Developers use it to build traditional websites and backend services like APIs. It's also used for chat applications, streaming services like Netflix, command-line applications, single and multiplayer games that work directly with your browser, and more.

Why learn Node.js?

If you're not yet sold on what Node.js can do and why you should learn it as a developer, consider the following:

1. Node.js is super accessible and easy to use

As long as you have a computer, you can learn Node.js—its entire tech stack is free for use and open-source. Node.js is also frequently listed as one of the best starters for beginner programmers because of its syntax and because JavaScript is an interpreted language. If you're familiar with C++ and Java, Node.js' language will be especially familiar.

Because Node.js allows developers to use non-blocking I/O, they can also build complex applications without their code becoming more complex.

2. Node.js allows you to work both the backend and fullstack of an application

One of the bigger perks of Node.js is that it allows users to learn JavaScript that's applicable on both the frontend and backend of a website, consolidating the learning process substantially and making you a more versatile programmer.

Other languages you might learn as a web developer, like Java or Ruby on Rails, are not usable on both the client and server side of a site, which often means much more involved communication between development teams and slower execution. Node.js, in contrast, allows developers to work full-stack whenever they need to without the cumbersome process of learning additional languages, so you can address client and server-side issues at once.

3. Node.js has valuable real-life application

The modern web is all about connection and interaction. Users want to be able to talk to their family, their friends, other users, and customer service representatives, and the web has adapted to support chat capabilities across all kinds of social and ecommerce platforms. That kind of tech requires a lot of quick-functioning and persistent support, and Node.js happens to offer both.

Because Node.js can be used on both the server and client side of a website, it has a fast synchronization process, allowing for real-time, two-way connections where both the client and the server can initiate conversation and freely exchange data. This makes it an exceptionally valuable tool for tech companies, ecommerce platforms, and games. And that's not to mention its dozens of other use cases.

4. **Node.js is in high demand**

Because of its versatility and capability, Node.js isn't going anywhere. In fact, for developers looking to land a lucrative career, Node.js is invaluable. Knowing Node.js is a highly marketable skill, because it allows you to manage all parts of a system rather than just one part; and with the biggest companies in the world incorporating Node.js into their tech stack, it goes to show just how valuable this software is.

How to learn Node.js

A great way to start learning Node.js is by diving in and teaching yourself. There are a plethora of resources online for anybody wanting to start their education independently. [Udemy](#) and [CodeAcademy](#) are two great places to start. If you want to take your learning to the next level, however, look no further than Bloom Institute of Technology (formerly known as Lambda School).

At BloomTech, we help aspiring web developers and coders become Node.js experts in our [Full Stack Web Development Course](#). Node's not the only thing you'll learn in this course, however. In our full-stack web dev class, we help aspiring developers become well-equipped to build almost any website from the ground up and well-versed in *all* of the languages and programs required to maintain them, including Python, CSS, HTML, React, and more.

Maybe you've tinkered around a little bit and decided you'd rather specialize in a wider-used programming language like Java. We've also got a course for that—see our newest [Backend Web Development Course](#).

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