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Back End Developer Skills You Need to Know

by

Nick Kolakowski

Dec 27, 2022

3 min read

Back end developers have a vital task: they must build and maintain the infrastructure that allows the front end of a website (i.e., what the user sees) to operate. While those end users may never think about all the work necessary to have a site load instantly, back end developers are obsessed with ensuring servers, applications, and databases can handle anything.

Organizations everywhere need their web infrastructure maintained, which is why there's intense demand for back end developers with the right mix of skills and experience. According to Lightcast, which collects and analyzes millions of job postings from across the country, organizations posted some 28,865 back end developer job openings over the past 12 months; projected growth for the profession is estimated at 19.2 percent over the next decade.

What Skills Do Back End Developers Need?

Lightcast also offers a breakdown of back end developer "distinguishing skills,"

which are defined as the advanced skills these tech professionals can use to differentiate themselves in a crowded marketplace:

Continuous integration

Amazon Web Services (AWS)

ElasticSearch

GitHub

Machine Learning

React JavaScript

MongoDB

Test Driven Development (TDD)

Big Data

Backend Development

That's in addition to "defining skills," which

are the day-to-day skills that back end developers need to fulfill their tasks to the best of their ability:

Software Engineering

Java

Python

SQL

Docker

Git

Unit Testing

Ruby

Software Development

Microsoft C#

Before a back end developer can focus on these upper-tier skills, though, they should devote their time and attention to mastering "necessary skills," which Lightcast defines as the foundation of the profession:

Node.js

Linux

Scalability Design

MySQL

Data Structures

Relational Databases

Scrum

Web Application Development

Agile Development

Different organizations will demand their back end developers possess different skills, of course; for example, a company that's put a heavy emphasis on the mobile web (and apps for Android and iOS) might want its back end developers to master mobile-centric programming languages such as Kotlin, Swift, Objective-C, and Java.

Where Can Back End Developers Learn These Skills?

Some developers opt to pursue a formal education, whether a degree program or bootcamp. But you don't necessarily need a degree or bootcamp certification to land a job in back end development. If you can demonstrate that you have the necessary skills (and can apply them to complicated challenges), you can potentially impress a recruiter or hiring manager enough to land a job.

If you're a fan of online learning, consider one (or more) of the following learning portals to start your programming journey:

Udacity

Codecademy

Coursera

Khan Academy

And if you're stuck while studying, you can visit sites like

Stack Overflow

as well as key subreddits like

r/webdev

in order to ask questions and find answers. Once you have a top-level understanding of what a back end developer actually does, consider starting with Linux and programming languages such as Python, Java, and SQL; once you've mastered those, move onto more complex topics such as AWS and

CI/CD

.

For those just starting out, some organizations will be only too happy to subsidize a round of formal training, especially in more advanced concepts. Always remember to ask a potential employer about training and development opportunities;

given the current demand for tech talent

, they could be more than happy to offer up whatever you need as part of your overall benefits package.

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AUTHOR

Nick Kolakowski

Nick Kolakowski has written for The Washington Post, Slashdot, eWeek, McSweeney's, Thrillist, WebMD, Trader Monthly, and other venues. He's also the author of "A Brutal Bunch of Heartbroken Saps" and "Maxine Unleashes Doomsday," a pair of noir thrillers.

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