



Computer Tools
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Front-end Developer

Introduction

Front-end developers create user interfaces (UI). UI is the graphical layout of an application that determines what each part of a site or application does and how it will look. "I've always found crafting polished user interactions that surprise and delight users to be the most rewarding and engaging task," says Mari Batilando, a software engineer at Meta. "In order to do this, you need to both have an eye for detail and a rock-solid understanding of the platform."

Job description

If someone wanted to build a website, they might hire a front-end developer to create the site's layout. The front-end developer determines where to place images, what the navigation should look like, and how to present the site. Much of their work involves ensuring the appearance and layout of the site or application is easy to navigate and intuitive for the user.

Average salary for front-end developers

Glassdoor reports an average yearly pay of \$90,345 for front-end developers in the US. This figure includes an average annual salary of \$83,119 and a reported additional pay of \$7,226. Additional pay insights may include profit-sharing, commissions, or bonuses. Factors like education level, experience, and certifications may affect salary range.

| Glassdoor | Zippia | Indeed | Payscale | ZipRecruiter |
|-----------|----------|-----------|----------|--------------|
| \$82,819 | \$92,147 | \$111,919 | \$82,607 | \$109,843 |

front-end developers work

The demand and flexibility of this position translate into many career opportunities across various industries and locations. Whether that means working with a non-profit organization, starting your own freelance business, or being an in-house developer for a company, you'll likely have the chance to find a role that fits your interests

Back-End development

Introduction

Back-end development refers to the development of server-side logic that powers websites and apps from behind the scenes. It includes all the code needed to build out the database, server, and application. From database migrations to API integrations to setting up the server-side technologies that make a website tick, a back-end web developer may be the talent you need to get your next web project off the ground.

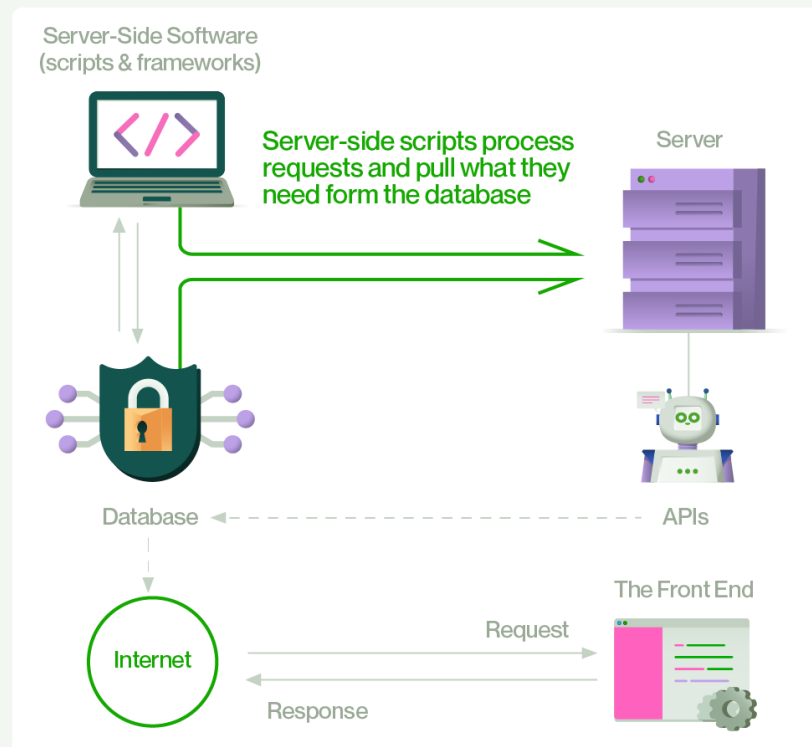
Back-End Development & Frameworks in Server-Side Software

upwork

Frameworks are libraries of server-side programming languages that construct the back-end structure of a site

The “**stack**” comprises the database, server-side framework, server, and operating system (OS).

APIs structure how data is exchanged between a database and any software accessing it.



Types of back-end languages

Back-end languages will differ in file size, performance, compatibility, how many lines of code required, and the style of programming. Some back-end scripting languages are object-oriented programming languages, a style of programming that bundles attributes and functions within objects. Other languages may be compiled rather than interpreted, something that affects load time, readability, and processing power required to run the application.

Let's take a look at the different types of back-end programming languages.

C#

C# is the language of choice for Windows servers and environments. If your technology stack is based off of Microsoft products such as ASP.NET, chances are high C# will be the most productive choice for your developers.

Java

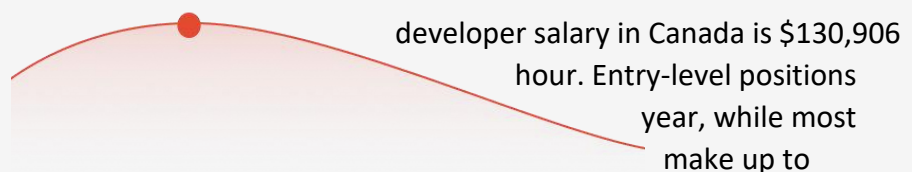
Java is a general-purpose object-oriented programming language that was designed with cross-platform compatibility in mind. Any machine running an installation of the Java Virtual Machine (JVM) can execute Java programs.

JavaScript (Node.js)

While traditionally considered a front-end scripting language, the introduction of Node.js showed the world that this general-purpose object-oriented programming language could also be used on the server-side of applications. As one of the core technologies of the web, JavaScript is now a popular choice for front-end and back-end web development.

Job Market in Backend Development

The average backend per year or \$67.13 per start at \$105,000 per experienced workers \$155,678 per year.



Full-stack Developer

Introduction

A full stack developer is a professional who has expertise in both frontend and backend web development. They have a solid understanding of a variety of programming languages, frameworks, and tools.

Examples of Full stack Developer Tools and Technologies

- A Frontend Framework is a set of pre-written code that helps developers build faster and more efficient user interfaces. Some popular frontend frameworks include React, Angular, Vue.js, and Bootstrap.
- Backend Frameworks help developers build the server-side of web applications. These frameworks include Django (Python), Ruby on Rails (Ruby), Express.js (JavaScript), and Laravel (PHP).
- Databases are used to store and manage data for web applications. Some popular databases include MySQL, PostgreSQL, MongoDB, and Oracle.
- Cloud services provide developers with access to infrastructure and services needed to run web applications. Examples of cloud services include Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform.
- DevOps tools help developers streamline the deployment process of web applications. Some popular DevOps tools include Docker, Jenkins, Kubernetes, and Git.
- APIs (Application Programming Interfaces) allow developers to integrate different software systems and services. Some popular APIs include Google Maps API, Facebook API, and Twitter API.
- Full stack Developers need to know several programming languages to build web applications. Some popular programming languages include JavaScript, Python, Ruby, PHP, and Java.
- To store data in your web applications, you need to learn how to use a database management system. MySQL and MongoDB are two popular options.



Job Market in Full stack Development

In the US, the Bureau of Labor Statistics predicts an impressive 16% growth in the job outlook for web developers between 2022 and 2032, and an equally impressive 25% for software developers. The average across all occupations is a mere 3%.

Of those, being able to create and maintain a system from start to finish, frontend to backend, is seriously valued. Right now, it's safe to say full-stack developers are sitting pretty in the job market.

In terms of the different remunerations, you can expect within the full-stack developer role, the amount of experience you have can really help decide your pay packet. In the US, the starting salary for a senior full-stack developer can be \$30,000-60,000 more than for juniors, which are high to begin with.

Any senior developer will tell you that this is just a reward for all of the hard work that goes into it. To get a look at the earning potential of other types of web developer roles, we've already crunched the numbers in our comprehensive web developer salary guide.

Once you get your first junior web developer job, you should be constantly looking to expand your skillset, whether that's learning new languages or new frameworks.

Once you can prove that you're an experienced industry professional both inside your company and in the community, a senior full-stack developer salary should be within your grasp. Here are the average salaries by job title according to Glassdoor:

- Junior full-stack developer: \$85,000
- Junior full-stack engineer: \$107,000
- Senior full-stack developer: \$161,000
- Senior full-stack engineer: \$183,000

By Region:

- Australia: 106,000 AUD (\$69,000 USD)
- Canada: CA \$77,000 (\$59,000 USD)
- Germany: €61,000 (\$66,000 USD)
- India: Rs 793,000 (\$9,000 USD)

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Thank You