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For years, industry experts have been abuzz about the tech talent shortage. Recent estimates by McKinsey Quarterly state that as the nature of work continues to transform, up to 375 million professionals will have to be retrained by 2030. In response, organizations across all industries have adjusted their employer branding strategies to engage and attract top tech talent.

Here at Stack Overflow, we partner with companies that are looking to grow their technical capabilities. Thanks to the data available to us, we're able to take a closer look at the job titles that are posted most frequently on our site—and in turn, some of the most highly sought-after positions in the technical landscape today.

Our Data Scientist, Dr. Julia Silge, analyzed the most frequently-posted job titles on Stack Overflow's Talent platform. In this guide, you'll find her research broken down by country, as well as some of the trending job titles that are driving today's hiring landscape. We've also included a few tips to help you stand out from the competition to attract the most in-demand developer types.

04

Most Frequently-Used Words in Tech Job Titles

On Stack Overflow's Talent platform, clients use a free-form field to title their job listing. We'll start by looking at the individual words that appeared most frequently in job titles.

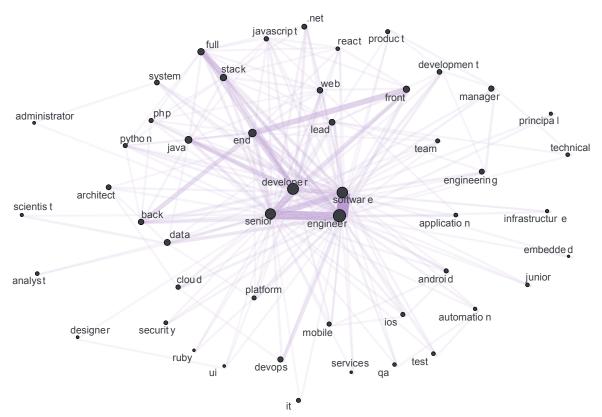
The top four words in tech job titles included:

1. SOFTWARE 2. DEVELOPER 3. SENIOR 4. ENGINEER

In the chart below, you'll see the relationships between all of these words. Darker lines indicate a combination of words that are often used together, while words with larger points are more popular on Stack Overflow's Talent platform.

We found that the most common job titles are fairly straightforward. They include simple phrases such as "software engineer," "software developer," "senior software developer," and "senior software engineer."

Most common job titles on Stack Overflow



Beyond the most recognizable words in this graph, we found that a few emerging technologies are entering the mainstream. Words focusing on software work such as security and DevOps have become increasingly popular. Additionally, roles for leadership positions like team leads and engineering managers appeared multiple times.

Most Common Developer Job Titles

In addition to identifying the most common job titles overall, we were curious to see how these titles might vary across different countries.

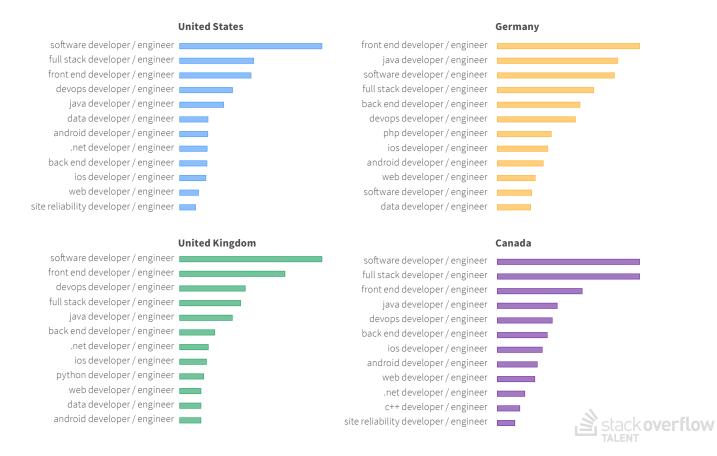
For this section, we combined the words "developer" and "engineer." We also removed seniority levels to identify the most recruited job titles on Stack Overflow Talent. This enables us to take a closer look at the most common job titles in the United States, the United Kingdom, Canada, and Germany.

Our data showed that the job titles below are the most common on Stack Overflow:

- Full Stack Developer is popular across all regions, but is more prevalent in North America
- Front End Developer and Back End Developer are titles that are widely used in each of the four countries we analyzed, but they're particularly popular in Europe
- **DevOps Engineer** appears frequently on Stack Overflow. In the United Kingdom, it's the third most common job title that we see.

Most common job titles on Stack Overflow

What is the relative prevalence for jobs in each country?





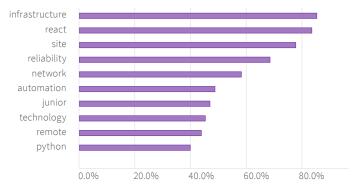
Companies in Germany, the UK, and Canada are more likely to use the term "developer" in job postings, while companies in the United States are more likely to use the term engineer." These terms have some historical differences in what they imply about a role" or an individual's background, but today they are largely used interchangeably in the software industry.

Trending Job Titles on Stack Overflow

Some emerging technologies have grown in popularity among employers that recruit on Stack Overflow's Talent platform. In the graph below, you'll find the words that exhibited the largest year-over-year growth in how often employers used them in job titles.

Most common job titles on Stack Overflow

What is the relative prevalence for jobs in each country?



% change from 2018 to 2017

Many of the words in the chart above are related to DevOps, site reliability engineering, and infrastructure roles. This is a recurring trend throughout this report. Not only do DevOps roles appear frequently on Stack Overflow, but this growth since 2017 is consistent with the growing need for these developer types. According to research by Akamai, the demand for DevOps professionals grew by 31% between October 2017 and October 2018.

For HR executives, this research begs one question: if so many critical developer types are common, how can you stand out from the competition to hire them? In the following section, we'll share some tips on how your employer brand can help you recruit candidates and retain your current developers.



07

Standing Out to the Most In-Demand Developers

Over the last few years, employer branding has been one of the most talked-about trends in recruiting—and for good reason. Your employer brand is a promise that you make to candidates about how you'll treat them during the interview process, as well as what their experience will be like if they choose to work for your company. The importance of a strong employer branding strategy is far from anecdotal. Harvard Business Review found that companies could pay up to 10% more per hire to compensate for a negative reputation.

So how can you put your company in a strong position to attract the developer types that we highlighted in this guide? Here are a few ways that you can brand yourself on Stack Overflow and make your company stand out.

Showcase Projects Your Tech Team is Proud Of

Across the last three editions of our annual Developer Survey, respondents have told us that one of their top job evaluation criteria is the technology they'll work with. We've seen some incredible examples of Company Pages on which companies showcase their tech teams' favorite projects. Our favorite examples have a few things in common:

- These companies do more than share lists of programming languages they prefer. They go into detail about the clients they work with, the products they've built recently, or plans for future innovation.
- The examples that resonate the most tend to describe how their teams are built. For example, Beamery's "Meet the Team" section explains how the engineering team is split into specialized units.
- The Company Pages that we highlighted are transparent about how developers impact their biggest goals. Some employers include stats about their growing customer base. Others get developers' attention by disclosing the total lines of code their teams shipped this year.



Promote Your Company's Mission

For most developers, there's no shortage of job opportunities—and the brands that stand out to them are direct and honest about what they can offer. Creating an authentic employer brand starts with your company's mission, which should be much more than a tagline. Developers want to know how your values drive the day-to-day work.

We recently highlighted companies that gave candidates a "day in the life" of one of their developers. The most effective examples showcased quotes from current programmers. These developers wrote about the work they're doing, the impact it's having on their company, and how their organization's culture enables them to innovate. Often times, getting quotes from developers is as simple as asking them to describe what they enjoy most about working for your company.

Consider Remote Candidates

Remote work options have suddenly become the norm at a growing number of companies. CNBC reported in 2018 that 70% of people globally work remotely at least once a week. More recent research from Gallup suggests that the remote workforce is growing and that those workers are more engaged than their traditional counterparts. Additionally, we've found that the applicant pool could increase by 6x when you offer remote work.

If you already offer remote work, share it with candidates in job descriptions. But if your company doesn't support a remote work culture yet, start the conversation. As we've seen in this guide, many of the roles you're likely recruiting for are common and in high demand. Considering candidates outside of your city could help you attract more candidates and fill critical tech roles faster.





Employers that stay informed about current market trends put themselves in a stronger position to attract tech talent, even when the competition for certain roles hits a fever pitch. This analysis about the most common job titles on Stack Overflow should inform your workforce planning for 2019 and beyond. As you've seen in this guide, some roles are in higher demand than others—and knowing the roles that require a more proactive approach will give you a leg up on the competition.