

Career in Software Development

Kelly Finnegan

ITEC 101: Thriving in the Tech Age

Yvette Sands

September 14, 2023

Industry - Describe the industry in detail in which you plan to pursue a career

Web development is a dynamic and rapidly evolving field that operates within the broader software development industry. It revolves around the creation, maintenance, and optimization of websites and web applications that are accessible through the internet. Web developers play a pivotal role in shaping the online experiences of users. These professionals are responsible for designing, coding, and maintaining websites and web applications. (2023) They harness a diverse array of technologies to ensure that websites are not only functional but also visually appealing and user-friendly. In essence, web developers bring digital ideas to life.

What makes web development particularly enticing is its continual growth and evolution. As technology advances, the demand for skilled web developers remains robust. This makes web development an attractive career choice for individuals who have a passion for coding and are dedicated to staying current in a dynamic and ever-changing field. What's even more appealing is the accessibility of web development as a career. Entry-level positions often require only a modest amount of formal education and training, making it an approachable field for newcomers. Furthermore, the rapid expansion of the internet continues to fuel the demand for talented web developers. The U.S. Bureau of Labor Statistics (BLS) predicts a remarkable 23% growth in web development jobs between 2021 and 2031, significantly outpacing the national average growth rate for all occupations. This outlook underscores the critical role web developers play in the digital transformation of society and the numerous opportunities available to those pursuing a career in this exciting and ever-evolving field. (2023)

Knowledge and Skills - What knowledge and skills should you learn to be successful in your chosen career?

The web development industry is characterized by a wide range of programming languages, frameworks, and tools. Key technologies include HTML, CSS, JavaScript, and popular frameworks like React, Angular, and Vue.js. Backend development often involves languages like Python, Ruby, PHP, or Node.js. HTML (Hypertext Markup Language) is used to create the structure and content of web pages. It consists of various tags and elements that define headings, paragraphs, links, images, and other page components. (Mikke, 2022) CSS (Cascading Style Sheets) is used for styling and layout. It allows you to control the visual presentation of HTML elements, including aspects like colors, fonts, spacing, and positioning. JavaScript is a versatile programming language used for adding interactivity and dynamic behavior to websites. React is a popular JavaScript library for building user interfaces. Vue.js is a progressive JavaScript framework that focuses on simplicity and flexibility. It's often used for building user interfaces and can be incrementally adopted into existing projects. Angular is for building dynamic web applications. It provides a structured way to create web components and manage data. Python is a high-level language known for its readability and simplicity. It's used for various web development tasks, including backend development, and scripting. Ruby is an object-oriented programming language known for its elegant syntax. It's commonly used for building web applications, emphasizing convention over configuration. PHP (Hypertext Preprocessor) is a server-side scripting language used for web development. Node.js is a JavaScript runtime environment that allows developers to run JavaScript on the server side.

These technologies play different roles in web development, with HTML and CSS forming the foundation of web pages, JavaScript providing interactivity.

IT Certifications - What certification(s) should you pursue to help you become successful in this career?

While certifications are not always required, they can increase your job prospects, and help you stay competitive in the industry. They serve as tangible proof of your expertise and commitment to staying current in a field that is continually evolving. For instance, Amazon Web Services (AWS) offers certifications that focus on developing, deploying, and maintaining applications within AWS cloud infrastructure. These certifications are particularly valuable in a tech landscape where cloud computing is becoming increasingly prevalent. (2005) Google provides certification options for building and deploying scalable applications using Google Cloud Platform (GCP) services. As Google's cloud services gain traction, possessing this certification can make you a sought-after candidate. Google's Mobile Web Specialist certification is invaluable for those interested in mobile web development. Given the continued growth in mobile web usage, this certification equips you with the skills needed to optimize performance and user experience on mobile devices. (2023) Microsoft Certified offers a range of certifications, including those for web developers. These certifications validate your ability to develop solutions on Microsoft Azure, a cloud platform used widely in web development. Additionally, their Full Stack Web Developer certification covers both front-end and back-end development, databases, and deployment, providing a holistic understanding of web development. (2023) In summary, certifications are a valuable investment in your web development career, enhancing your skill set and making you more appealing to potential employers in an increasingly competitive job market. They demonstrate your commitment to staying at the forefront of industry trends and technologies, which is essential for long-term success in web development.

References

- Federal Aviation Administration. (2005). *Certification*. Amazon.
<https://aws.amazon.com/certification/certified-developer-associate/>
- Google. (2023). *Certifications | learn | google cloud*. Google.
<https://cloud.google.com/learn/certification#why-get-google-cloud-certified>
- joshwelschmeyer2. (2023). *Student Hub - Student Certifications*. Student Hub - Student Certifications | Microsoft Learn.
<https://learn.microsoft.com/en-us/training/student-hub/certifications>
- Mikke. (2022, October 3). *14 popular programming languages and their uses explained*. Mikke Goes Coding.
<https://mikkegoes.com/14-programming-languages-explained/#:~:text=CSS%20or%20Cascading%20Style%20Sheets,and%20makes%20them%20look%20pretty.>
- What does a web developer do (and how do I become one)?*. Coursera. (2023).
<https://www.coursera.org/articles/web-developer>
- What is a web developer?: Skills and career paths*. Code a New Career | ComputerScience.org. (2023, May 25). <https://www.computerscience.org/careers/web-developer/>