

Développement



Full-stack Developer

Become a full-stack developer to write different kinds of code that handle front-end and back-end tasks.



Path duration:
680 hours



Hired or
refunded**



Personal mentor



Average duration
of full-time study:
12 months



Bachelor's-level
diploma *

*Développeur concepteur logiciel - NSF 326t - Level 6 (Eu) 6 (UK) Bachelor's-level diploma (Fr) - filed in the RNCP by ministerial order 10/15/21 officially published on 10/15/21

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OPENCLASSROOMS

One million computer programming jobs are estimated to be created in the U.S. by 2020 - as well as 700,000 in Europe - thanks to unprecedented growth in the tech sector.

Here at OpenClassrooms, we pinpoint the key skills needed for the most in-demand jobs and develop courses and diplomas to train our students in those areas. That's why we've developed this one-year bachelor's-level diploma in web development, which you can complete entirely online with the help of a dedicated mentor.

What will I do as a full-stack developer?

The full-stack developer can handle both back-end and front-end tasks, although they may not necessarily be an expert in either. If you're torn between learning multiple technologies, this might be the path for you! Full-stack developers may:

- Build a site backend in programming languages such as Ruby
- Use front-end libraries or frameworks
- Manage application deployment and put projects on servers
- Perform sysadmin tasks
- Run SQL queries on databases

Want to deep dive into web development? You can read about it [here](#).

You may be wondering whether to take the **full-stack developer** path or a **more specialized** path! If you're interested in an overview of both front-end and back-end programming, without going deeply into different libraries, then you're in the right place. (Or if you're completely new to programming, consider starting with our associate's-level program, the [Web Developer Path](#), which provides an intro to both the front-end and the back-end.)

If, however, you prefer to attain a **more advanced level** in one type of programming and find a more focused job, we recommend looking into one of our other [development paths](#). Think of the medical world as a parallel. As a doctor, you can be a generalist or a specialist. Generalists can only go so far before specialists need to take over. The same is true for development jobs. **Full-stack developers** can get jobs in **early-stage startups** when there's a need for a developer to do many tasks simultaneously. **Specialized developers** can get jobs in **larger startups** and **large companies** because, by this point, the code base already exists and a more focused talent is required.

How much will I earn?

Web development can be a lucrative career with many prospects opening up as you continue to rack up valuable experience. Here is what you might expect to earn in your career as a full-stack web developer:

United States

Beginner: \$50,000 - \$80,000

2-5 years: \$70,000 - \$90,000

5+ years: \$100,000 +

United Kingdom

Beginner: £30,000 - £40,000

2-5 years: £40,000 - £60,000

5+ years: £60,000 +

Salaries will vary depending on your location or the location of your employer.

What are my job prospects?

This path can prepare you for the following jobs:

- Full-stack developer
- Junior front-end developer
- Junior back-end developer

Who is eligible to enroll?

To be eligible to earn this path's diploma, candidates must demonstrate proof of one of the following prerequisites:

- an associate's degree, or equivalent, in computer science, web development, or software development
- **or** a high school/secondary school degree, vocational certificate, or equivalent, and at least 2 years of professional experience in IT, web development, or software

development

All other candidates will need to go through a specific admissions process. These candidates must have:

- an associate's degree, or equivalent, in any subject and at least 1 year of professional experience in any field
- **or** a high school/secondary school degree, vocational certificate, or equivalent in any subject and 3 years of professional experience in any field
- **and** a completed placement test consisting of:
 - OpenClassrooms course completion certificates from [Build Your First Web Pages With HTML and CSS](#), [Think like a computer: the logic of programming](#), and [Manage Your Code Project With Git & Github](#)
 - a personal programming project, accompanied by a 10-minute recorded video that explains the project itself and the code behind it

For all candidates, the admissions process starts with a form to validate the aforementioned prerequisites, as well as the alignment between the candidate's professional goals and this path. Any necessary documents for the candidate's application will be collected via this form. If necessary, an individual interview with the candidate will also be organized.

- **Language:** Candidates whose native language is not English will need to submit proof of a B2 English level on the CEFR scale, an IELTS band score of 6.5, or a TOEFL score of 80.
- **Equipment:** Candidates must also have access to a computer (PC or Mac), headphones, a microphone, a webcam, and a good internet connection for mentoring sessions (3.2 Mbps upload and 1.8 Mbps for download). In addition, to master the skills on this path, you will need to:
 - Have at least 8 GB of RAM (16 GB is more comfortable) and 100 GB of storage space available on your computer.
 - Have administrator rights to your computer in order to install required programs.

What will I learn?

In this path, you'll learn how to:

- Create web projects with JavaScript
- Use React, a popular JavaScript library
- Write backend Ruby code
- Create Ruby on Rails applications
- Integrate React with Ruby on Rails
- Query a database that uses and stores information

- Deploy a website online
- Implement unit and integration tests
- Write project documentation
- Optimize performance
- Analyze a project and choose a technical solution
- Design technical architecture using UML diagrams

How will I learn at OpenClassrooms?

Our learning method is unique and revolves around two elements: **professional projects** and dedicated **mentoring sessions**.

Projects

At OpenClassrooms, learning is [project-driven](#) because that's the fastest way to become proficient. Projects offer hands-on experience so you can hit the ground running when you start your new job.

Want to see an example of a project? Read our blog post [here](#).

Mentorship

During your path, you will be assigned a mentor who will offer one-to-one support via weekly video conference sessions. This mentor will offer guidance on your projects, help define objectives and guide you until you reach them. Our mentors are dedicated professionals who are experts in their field and have experience in sharing their know-how with our students.

Any questions? Contact our student advisors at +44 20 3868 9900 or +1 (929) 376 0101, or [request more information here](#). Opening hours: Monday to Friday 8.30am- 6.00pm UK time, until 1 pm Eastern Time.

Project 1 - 10 hours

Get started with your training

Set yourself up for success in your path. Find out what you are going to learn and get to know your mentor. You will also define your learning goals in this first project!

Skills


- Prepare for your training

Associated courses



Understanding the Web

 Easy


 4 hours

Does the web interest you, but you aren't totally clear on how the whole thing works behind the scenes? Learn internet history, vocabulary, logistics, and more with this course!



Learn How to Learn

 Easy

 6 hours

The ability to learn quickly and effectively is a key skill that can open the door to any domain or career throughout your life. Follow this course to improve your learning capacity and to take control of your personal and professional development!

Project 2 - 80 hours

Integrate a WordPress theme for a client

Your new client, a real estate agency in the mountains, needs a website to show the chalets they sell. You'll use WordPress to build their site!

Skills

- Adapt a WordPress theme to client needs
- Select a WordPress theme based on client needs
- Write documentation destined for non-technical users

Associated courses



Build Your First Web Pages With HTML and CSS

Easy

10 hours

Learn to create your first web pages using HTML and CSS, the two most important languages on the web. No coding experience required!



Create Web Page Layouts With CSS

Easy


10 hours

Go beyond basic HTML and CSS skills and learn how to create great layouts using CSS layout techniques!



Build quick and beautiful WordPress sites

 Easy

 10 hours

WordPress is an indispensable tool for building any type of website. It'll serve you well to know how to launch a good-looking site quickly on the platform.

Project 3 - 80 hours

Analyze a client's needs for their film festival

Learn how to translate the needs of a client into a clear, attainable solution!


Skills

- Write a project brief
- Choose an appropriate technical solution
- Detail project specifications
- List functionalities requested by the client

Associated courses



Manage your code project

 Easy  10 hours

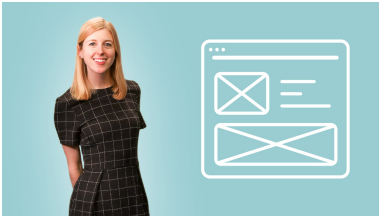
Writing code is great, but you've gotta keep an eye on what you're doing! You'll need to manage your project (whether using Agile, Scrum, or a different workflow) from start to finish in order to hit your deadlines and keep everyone happy.



Create Responsive Websites Efficiently With Bootstrap 4

 Medium  12 hours

Bootstrap, a popular CSS framework created by Twitter developers, will save you design time and allow you to quickly build attractive, responsive websites! Learn the latest version, Bootstrap 4.



Break Down and Integrate a Mockup



Medium



6 hours

Web developers should be able to break down the mockups they receive from designers. How can they integrate these designs in HTML and CSS?

Project 4 - 100 hours

Build your portfolio site using React

A portfolio site allows you to show your projects and is a great asset for any developer. Build your first portfolio site using the hottest front-end technology: React!

Skills

- Build a React single-page app
- Build components with React

Associated courses



Learn Programming With JavaScript

 Easy  15 hours

Build a strong foundation in web development by learning and practicing JavaScript, one of the major programming languages on the web. You'll even create a simple application!



Write JavaScript for the Web


 Medium  10 hours

Use your JavaScript skills to build interactive, dynamic web apps. Learn to interact with your users and to leverage external APIs to build rich, immersive user experiences.



Manage Your Code Project With Git and GitHub

 Easy

 6 hours

Install Git and GitHub and learn basic Git commands to manage your code and deploy your development projects.

Project 5 - 100 hours

Map out a technical solution for the food delivery site ExpressFood

ExpressFood allows people to order their favorite meals and desserts for delivery at home! Help them set up a data structure that ensures no one goes hungry.

Skills


- Create technical architecture using UML diagrams
- Design a database schema
- Use a schema when designing a database

Associated courses

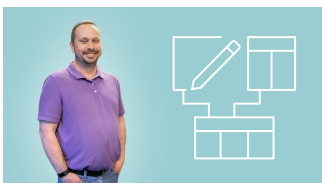


Apply a Domain-Driven Design Approach to Development

 Easy

 4 hours

Use DDD to communicate the technical architecture to the various stakeholders in your project, and learn functional modeling using UML use-case diagrams and class diagrams.

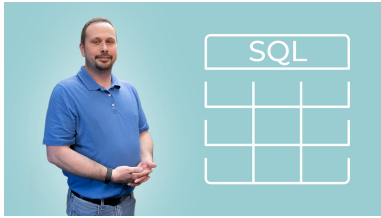


Design the Logical Model of Your Relational Database

 Easy


 4 hours

Ready to store your application's data? Let's cover the basics of SQL and design the structure of your first relational database with an Entity Relationship Diagram (ERD).



Implement a Relational Database with SQL

 Easy

 4 hours

Ready to put your database modeling skills to use? Design and build a physical relational database with Structured Query Language (SQL) and learn the tools to manipulate your table data.

Project 6 - 100 hours

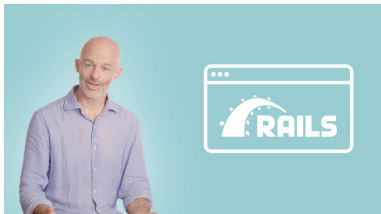
Track your fitness habits

Combine a Ruby on Rails back-end with a front-end in React to build a cool activity tracker, allowing you to add activities and monitor your overall fitness trends.

Skills


- Use Ruby with a database
- Create a Rails app
- Handle user logins securely with the Devise Rubygem
- Perform basic programming tasks with Ruby

Associated courses



Build dynamic websites with Rails

 Easy


 20 hours

In this course, we'll learn how to use the popular Ruby on Rails framework to build database-backed websites. We'll be creating a demo app that features a blog!



Learn the Command Line in Terminal

 Easy

 4 hours

The command line in Terminal is where a lot of programming efficiency happens. Take this course to better communicate with your computer!

Project 7 - 100 hours

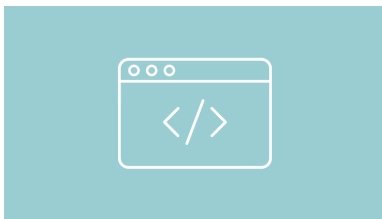
Create a website for a prestigious bike race

Allow people to track riders, see Flickr photos from the event, and more via a site back-end, front-end, and external APIs!

Skills

- Design a database schema
- Develop a website for a client
- Use an external API in JavaScript
- Write tests that assess the functionality of a program

Associated courses



Deploy Rails Applications

 Hard  20 hours

As the Ruby on Rails apps on which you work get more complex, you'll need to be sure you can handle configuration and deployment like a pro.



Build Your Web Projects With REST APIs

 Easy  4 hours

Enhance your web projects with REST APIs by accessing data that can be integrated into your own applications. APIs will add a whole new dimension to your software!

Project 8 - 100 hours

Build an aid platform for your neighborhood

Help those in need by building a platform that links people needing help with volunteers in the vicinity. You'll create the back-end and front-end yourself, use an external maps API for localization, and make sure the whole thing looks great on mobile.

Skills

- Deploy Rails apps
- Design wireframes for web or mobile
- Create a Rails app

Associated courses



Deploy apps on Heroku

 Medium  2 hours

Heroku is a platform that will allow you to easily deploy Rails apps. Learn more about it and find their documentation [here](#).



Learn the Command Line in Terminal

 Easy  4 hours

The command line in Terminal is where a lot of programming efficiency happens. Take this course to better communicate with your computer!

Project 9 - 10 hours

Survey the technology landscape

Create your own dashboard to stay up to date on all the latest and greatest tech happenings!

Skills


- Set up a system for staying up to date with technology
- Identify tools and resources for staying up to date with technology

Associated courses



Stay Up to Date With Innovations in Your Field

 Easy

 4 hours

Learn how to stay abreast of industry changes, pinpoint areas for professional development, and work more efficiently in the digital age.