

{the jump}

Digital School

Professional JavaScript
Developer Bootcamp
Syllabus (Pro JS)

Are you ready to make the
jump to your next level of
JavaScript expertise?

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What is this JavaScript bootcamp and who is it for?

This **JavaScript Bootcamp** is a remotely accessible, 17.5-week, **part-time** programme of in-depth software engineering training and optional career-change support, taught two evenings per week (Mon & Wed or Tues & Thur) 18:30 - 21:30 with ongoing projects, homework, online & offline support throughout.



Who is it for:

This is for people who want to learn how to use JavaScript to build websites and web apps to a professional standard, in order to:

- **Enter the industry** as a developer
- Upskill to **advance their career** either as a developer or non-dev (e.g. product manager or project manager)
- Implement their **entrepreneurial** ideas

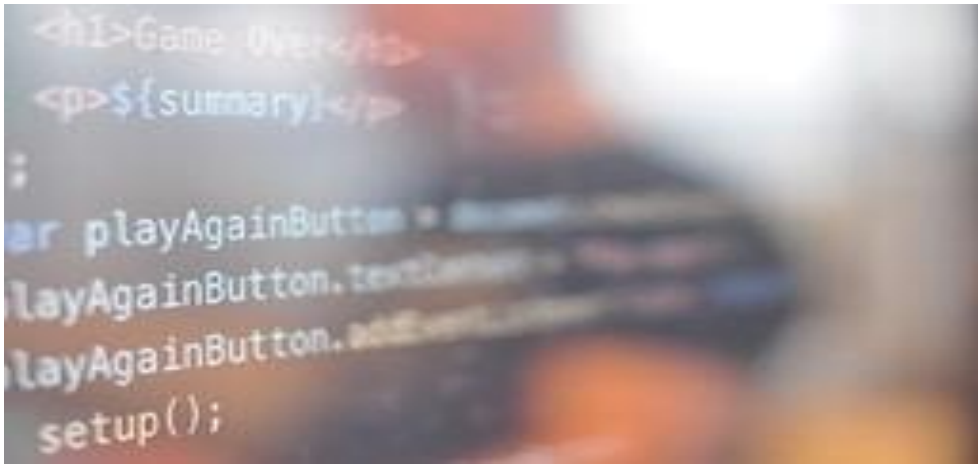


Required experience:

We've designed this for people ranging from absolute beginners with no coding experience to intermediate users of JavaScript.

What exactly is JavaScript?

JavaScript is a scripting/programming language which is typically used to **write instructions for websites and web applications**, to programmatically control how their constituent parts **respond** to specific events, triggered at any time, by users or other programmes.



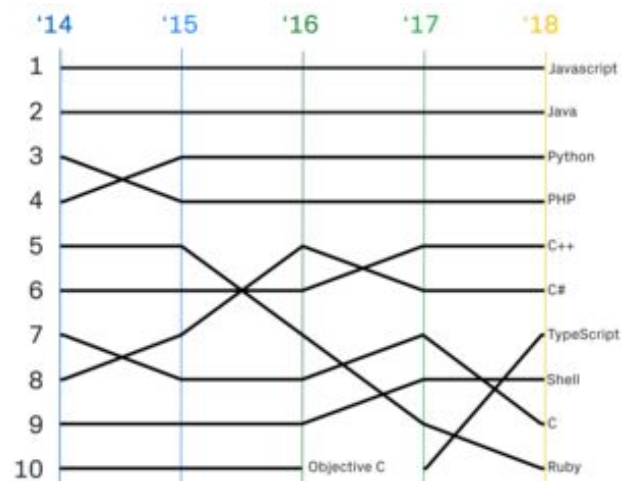
How it works is that these instructions create and implement the website's/web app's internal logic, to determine how it will calculate, validate and manipulate specific input and output data, across the full client-server model, to produce an intended response.

e.g. a user enters details on their desired clothing style, size and budget and the web app's instructions determine which products it displays, and **persists** that data for online or offline use later on; or a website responds to travel data updates with visualisations of appropriate routes and travel times without reloading the page. The instructions, written in JavaScript, **automate** responses to events and transform static web pages into **interactive** websites/web apps.

Why should I learn it?

Learning JavaScript properly is extremely valuable for you because **JavaScript developers are in huge demand**, have **great earning potential**, and can **work from anywhere** in the world.

This is because **JavaScript is THE No. 1 language of choice for the industry**. The evolution of frameworks such as React have made it possible to use JavaScript to create high performance **Single Page Applications** and offline technologies enable it to create **Progressive Web Apps**.



JavaScript is critical for building modern websites and web applications - it's the **ONLY** programming language that can run directly in the browser - **All modern browsers are built specifically to run JavaScript**.

JavaScript is the ONLY programming language you need to leverage the full-client server model - The Node.js runtime environment now allows you to use JavaScript to develop the back end of your website/web application as well. So you don't need to learn Ruby

JavaScript can also be used in many other areas including game development, smart houses and **drone control**

Why learn with The Jump?

We remove the financial barriers to learning:

- Full-time bootcamps require you to **quit your job** and **lose your income** to attend, which can easily cost you over over £12K in lost income. Our bootcamps are **Part-Time** so **YOU DO NOT HAVE TO QUIT YOUR JOB AND LOSE YOUR INCOME**.
 - Without financing, you can pay over 16 weeks at **0%** interest
 - We offer 3rd party financing through Lendwise & Coursebud
 - <https://cta.lendwise.com/jumpdigital/apply-now>
 - <https://www.coursebud.com/register/379>
-

We help you learn to a higher standard:

- By allowing students to maintain their income while they learn, we remove the financial pressure to compress the bootcamp into a shorter time-frame, which gives you longer to explore ideas; learn in more depth; reach a higher standard.
-

We focus on the most relevant and valuable technologies, languages & frameworks to increase your access to the best opportunities:

- E.g. many schools teach Ruby. We don't as it's a stagnating technology & there are over 6 times as many JavaScript roles as Ruby roles. We continuously update our content to be relevant to what the industry is doing right now.

Our instructors are current industry professionals working with the latest tech rather than out of date trainers or academics:

- ‘There is a serious mismatch between what is taught in schools and universities and what businesses require’
- ‘Current teaching in Universities is devoid of commercial reality and does not have a strong enough vocational aspect.’

House of Commons Science and Technology Committee: Digital Skills Crisis

We help you reach a professional standard much faster than if you take online courses or are self taught:

- The explosion in JavaScript capability has brought complexity. This bootcamp reduces the time it takes to learn the most valuable and up to date skills and expertise by:
 - Cutting through the noise and complexity
 - Providing direction on where to focus and what to avoid
 - Supporting you when you’re stuck
 - Providing a place to learn that’s free from distraction
 - Providing a community to learn with
-

We can provide best-in-class career-change support, if you want it:

- Robert has 10 years experience in talent acquisition so knows how to help you get to where you want to be.
-

Our alumni programme:

- By training with the jump digital school you get access to the benefits of our alumni programme which includes our referral scheme to allow you to earn back your training fees and more.



Read Aaron's story

Aaron came to us as a junior developer who was looking to advance his career

"The Jump has been life changing for me. Just one month into their JavaScript bootcamp and I was able to start interviewing for roles that I was originally planning on interviewing for in a years time. I couldn't believe it, but thanks to what I'd learned so far **I got the job.** I've never had such quick return on investment with anything.

These guys have truly hit the nail on the head for the London market. **So many bootcamps focus on Ruby but the demand is really for JavaScript** and **their professional JS course is ridiculously thorough.**

I've tried a lot of different coding resources since starting my career and nothing quite beats face to face tuition with a professional. **James, is a true master of his craft and his passion for quality code really rubs off on you!"**

What will I learn?

This Bootcamp is an in-depth programme of JavaScript development training which has been designed to give beginners and intermediate level users of JavaScript, the expertise and confidence to **build and deploy cutting edge web applications to a professional standard**. To do that, you will learn the following:

The principles of programming

The constituent parts of JavaScript language

- e.g. data types, data structures, saved values, control flows, functions - what they are, what they do and how they work and how you use them.
- ES6+ updates

Using JavaScript to create an interactive User Interface

- The browser and their resources (geolocation, device type etc.)
- The DOM and manipulating elements in the DOM
- 2/3d animation e.g. GreenSock & Three.js



- Front-end frameworks - e.g. **React** for building Single Page Applications
- State management systems - e.g. **Redux**



API's (Application Programming Interface)

- AJAX calls to 3rd party API's to consume services
- Building your own API's (REST and GraphQL)
- Graphing and Real-Time (Web sockets)

Managing Databases to store and update data

- SQL e.g. Postgres, MySQL
- NoSQL e.g. MongoDB, redis, elasticsearch, neo4j

Managing servers to pump data between your databases and your user interface

- Node
- Node package manager
- Express
- Serverless technologies



Testing to eliminate bugs and errors

- Test Driven Development
- Typescript & test automation?

Offline technologies and concepts

- For building Progressive Web Apps

Build processes to bundle source code into an executable programme

- E.g. Webpack



Tools and how to use them e.g.

- Git
- Chrome Developer Tools
- VS Code & codepen
- Command Line Interface (CLI)



Writing software - best practice

- Design patterns
- MVC, MVVM, MV* - separating data, business logic and UI logic

Word cloud:

JavaScript JSON JQuery JavaScript Debugging JavaScript Libraries JavaScript Frameworks React TypeScript Redux ES6+ Node.js Express DOM (Document Object Model) GIT GitHub GitLab Git Clients Bash Command Line 3rd Party API's TDD/BDD Build Process (Webpack) Graphing D3 Networking Theory Serverless technology GraphQL Node.JS Express Programming concepts Programming fundamentals Programming paradigms Design patterns Netlify Server Database Relational Non-relational SQL NoSQL Postgres MongoDB Browser MVC (Model View Controller) REST (Representational State Transfer) Functional Programming Object Oriented Programming Object Relational Mapping Asynchronous programming Loops Variables Functions control flow Syntax Semantics Chrome Developer Tools Version control Developer environment Agile development authentication tokens Single Page Applications (SPA's) Progressive Web Apps (PWA's)

How will I learn it?

The bootcamp is structured as follows:

17.5 weeks (approx 260 hours) of **part-time** training, including:

- **35 sessions (105 hours) of live, interactive and real-time instruction** led by an expert instructors with commercial experience accessed remotely, online, from anywhere
 - 3 hours per evening
 - 2 evenings per week (Mon & Wed / Tues & Thur)
 - Delivered over 17.5 consecutive weeks

These sessions are a mixture of explanations, examples, code-alongs and practical exercises

We recommend **Approx 9 hours of homework per week**, split between projects, challenges and tests, to enable you to explore ideas in greater depth & embed your learning. These also contribute to your portfolio.

Access to comprehensive and structured course materials

Access to a responsive bootcamp staff providing online & offline support when you can't find your own way through.

Continuous feedback and development approach to keep you on track

What optional career-change support can I receive?

Alongside your technical training, we'll provide optional support to enable you to change career:

- **Recommendations:** For students who meet or exceed the performance targets, we provide letters of recommendation

- **CV/LinkedIn Clinic:** Optimise how effective your profile is at garnering positive attention to convert applications to interviews.

- **Portfolio:** Demonstrate your abilities and commercial value

- **Interview coaching:** Convert interviews to offers. Practice:
 - Answering technical interview questions
 - Presenting yourself effectively
 - Overcoming objections
 - Competency based interview questions
 - Negotiating financial remuneration

Who will be my instructor?



James will be your instructor. As well as being a professional full-stack web developer with over 13 years of experience, he's also a very patient and well loved coding instructor having taught at General Assembly for 3.5 years. He'll work just as hard as you to make sure you're learning exactly what you need to become a professional full-stack web developer.