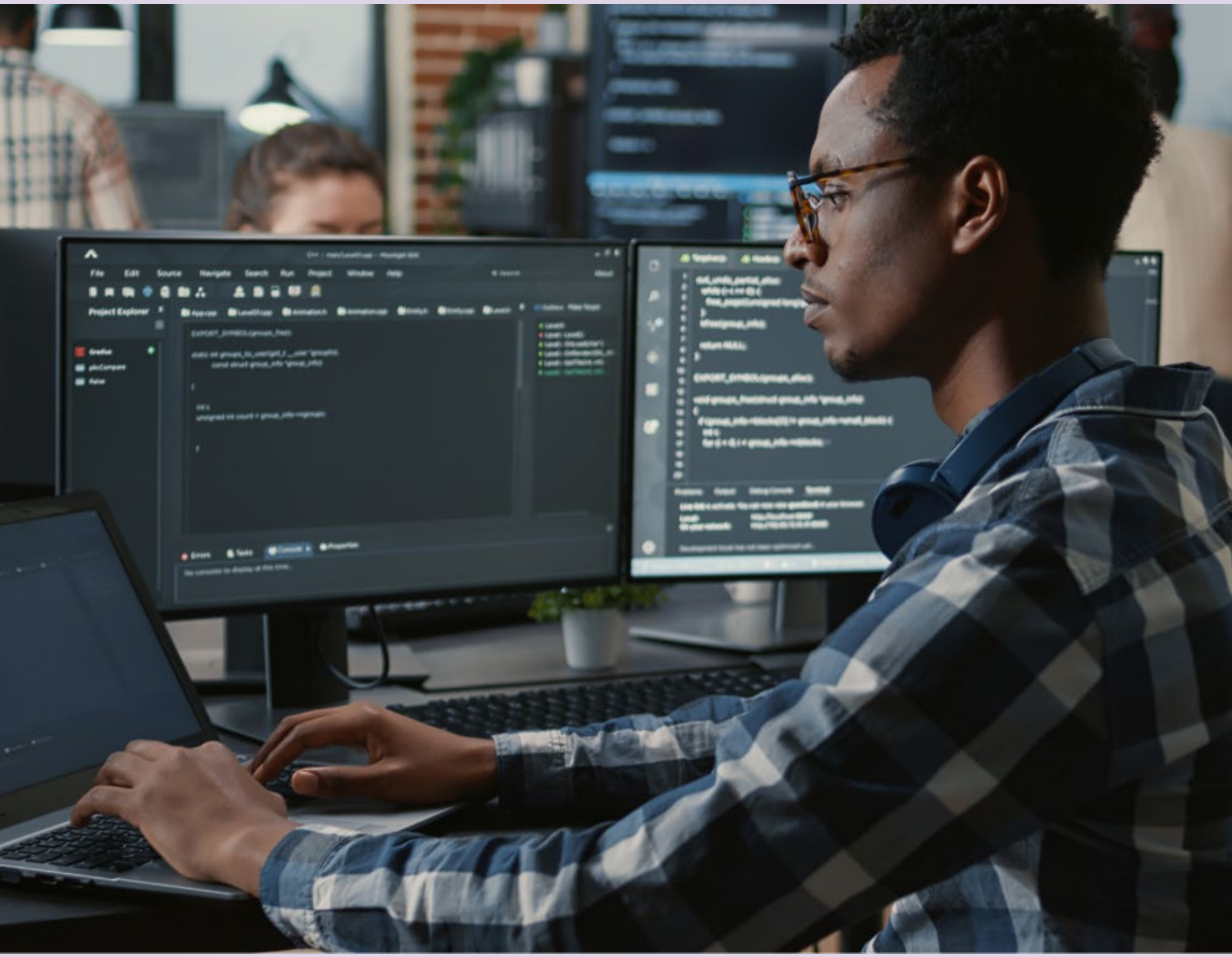
MANCHESTER 1824
The University of Manchester

Immersive Certified Full Stack Web & Software Engineering Bootcamp

Bootcamp Brochure



In partnership with HyperionDev

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Overview

Over the course of this immersive bootcamp, you'll learn the principles of full-stack web development and software engineering in detailed online modules, with frequent cohort check-ins to ensure that you're progressing consistently toward final certification. As with all HyperionDev bootcamps, you'll have access to specialist code review, waypoint check-ins, and prompt review and feedback on all your coding submissions so that you can create programs and websites at a high-level industry standard.

Going beyond the essentials

Progress from the basics of programming, web development, and data management as you learn to use HTML, CSS, and JavaScript. Once you are comfortable with these, you will learn essential and advanced concepts in software engineering through Java and the principles of object-oriented programming (OOP), as well as SQL and database programming with Java. Finally, you will go on to learn advanced web development with the MERN Stack, using PHP, NodeJS, and React. During each phase, you'll complete capstone projects and create real applications, websites, and programs.

HTML	Java	MongoDB
CSS	PHP	Express
SCSS	Git	React
JavaScript	SQL	Node

The process

1. Log onto your personalised dashboard
2. Complete exercises online
3. A mentor reviews your work
4. Perfect your marketing over 3-6 months
5. Receive a certificate of completion
6. Begin your new career in tech with HyperionDev Support

Code review powered by HyperionDev

Bootcamp code reviewers and mentors are expertly trained to integrate code review into the bootcamp learning experience for students. The on-demand code review method helps participants to become fluent in their selected area of study much faster.

Our 1-on-1 skills review approach works

Code review enables you to learn to code the right way through mastery of deeper aspects of web and software development that are a prerequisite for a career in coding. We help you to master industry-level development and set the foundation for a lucrative career in coding.

Here's why learning through code review is smarter

Don't make the same mistakes as computers

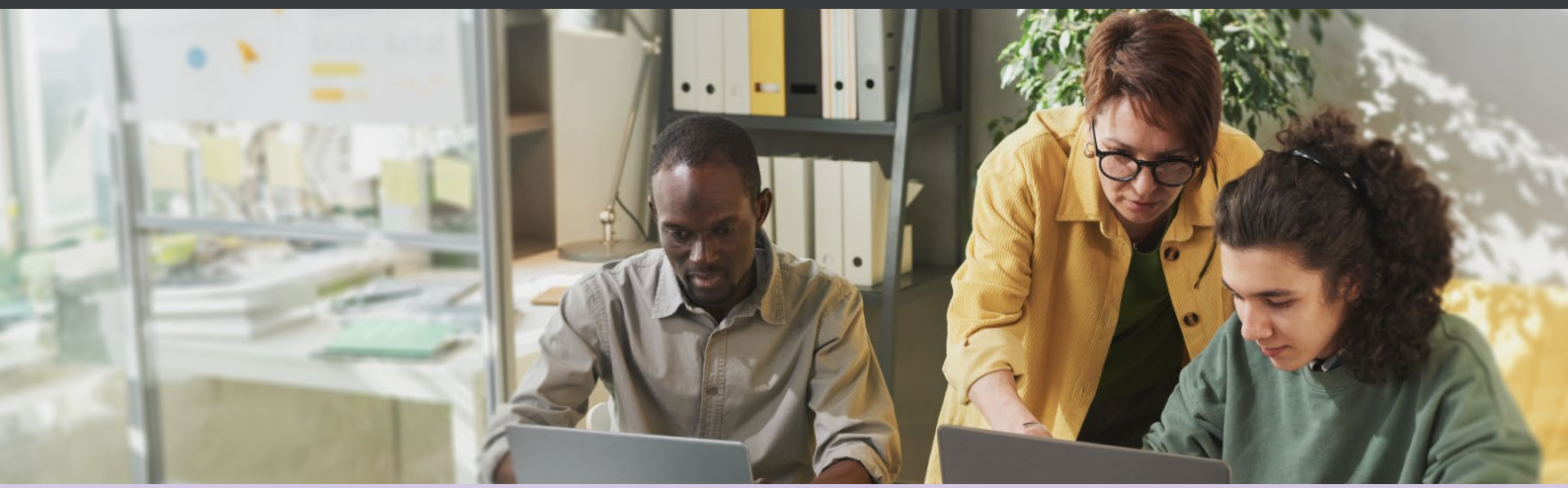
Automated code checking is like spell check for computer programs. But you can't write a world-class essay with just good spelling – you need the right tone, facts, grammar, and style. Only human-led code review can help you learn aspects of coding that are analogous to tone and style that will make you truly fluent as a developer – automated graders just can't help you learn this!

Get unstuck with on-demand technical help

Our code reviewers will ensure you move at a steady pace by helping you debug your programs. This will help you to keep moving forward so you stay on track.

Be exposed to industry standards from day one

Developers in the real world have their work assessed by a senior developer through the technique of code review. We're the only bootcamp in the world that exposes our students to this technique from day one, giving you an advantage in the job market.



We layer a proven 1-on-1 personalised code review approach over our learning content

Industry experts with expertise tailored to your goals

You'll be able to work with a team of expert code reviewers who will guide you with immediate live assistance on our Discord system, through 8 monthly 1-on-1 synchronous call check-ins, and with career coaching.

Join a community of career-changers

Learn as part of a cohort of students all working towards ultimate career fulfilment. Join online group tutorials, community chats and meetups, and peer coaching.

Receive grading and certification through 6 cohort check-ins

Join us online for frequent check-ins, and overcome obstacles in your practical coursework as you work towards formal certification.

Why you should choose a career in tech

Knowing how to code is a great advantage, as it opens up new career opportunities, develops skills, and promotes personal growth. The last decade has seen massive growth in the use of digital technologies, and today, tech firms offer some of the highest-paying jobs in the world.

Knowing how to code increases your competitive advantage in the working world, even if you don't make the move to a new tech career. Companies are always looking for prospective hires who know how to solve problems and innovate, as well as use technology in addition to their core skill set – skills that can easily be highlighted with knowing how to code.

Finally, coding skills bring many personal rewards. Programming requires a mindset of thoughtfulness and innovation in assessing and solving problems, and as you develop these abilities, you build a skill that can be used in almost any area of your life.

Post-bootcamp support

We're with you every step of your journey, and our support in partnership with HyperionDev doesn't end when you complete the bootcamp. Our career services are developed to help you stand out from the crowd and grab the attention of top employers.

Technical CV and Portfolio

Receive technical assistance in getting your CV and tech portfolio industry-ready by applying accepted best-practice formats.

Bootcamp Certificate

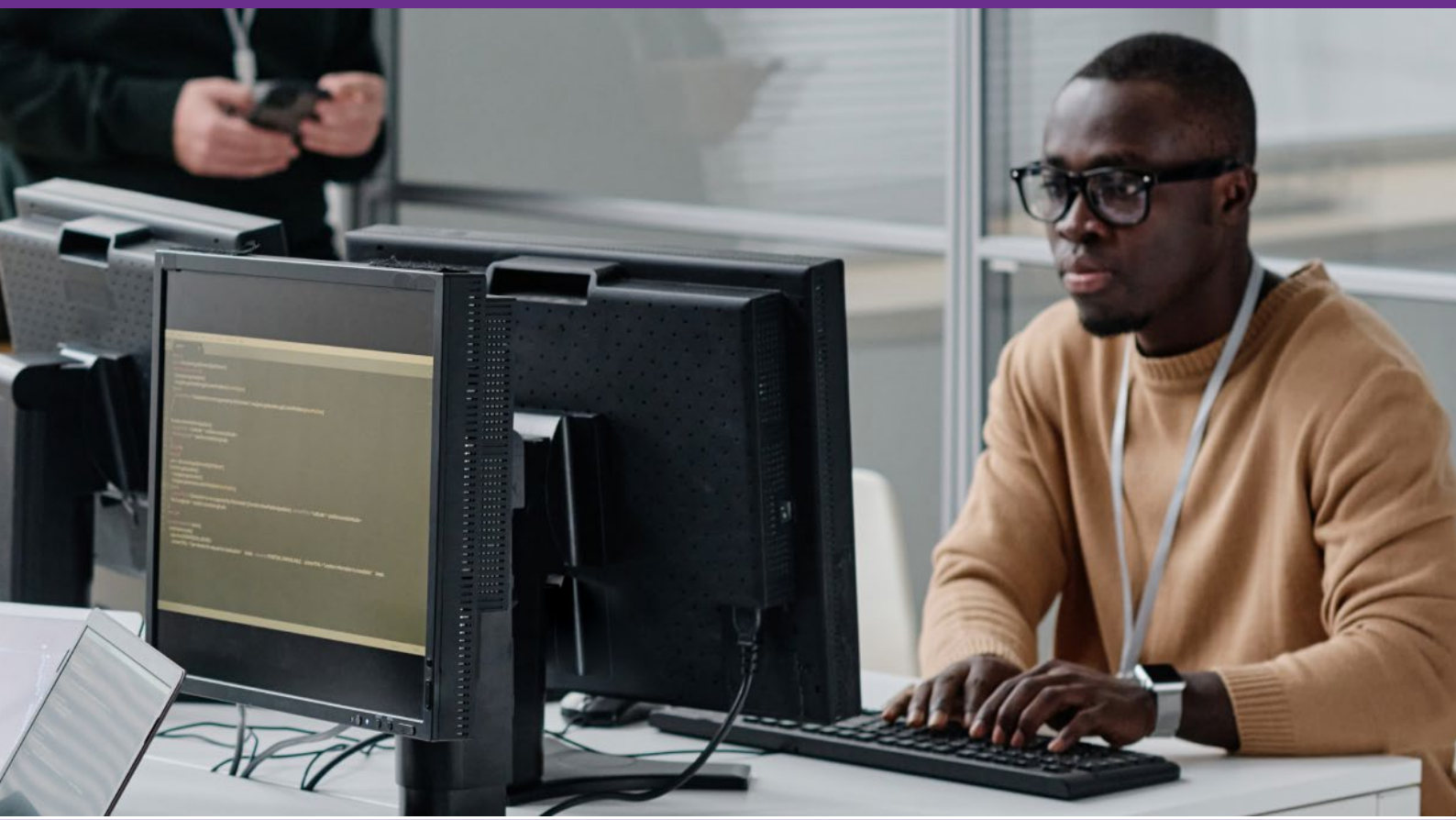
Walk away with a new certificate as evidence of your skills and expertise in full-stack development.

Interview Preparation

Know what to expect when getting ready for that big interview with expert interview preparation guidance from professionals who have been where you are.

Join our Hiring Network

We work with select hiring partners and aim to help you prepare for and land your first tech job interview after your bootcamp.



Potential career paths

Back end web developer

A website is always much deeper than what you see: beneath the buttons and banners lies a deep system of complex machinery that allows the website to do all kinds of things, from authenticating your activity, and ensuring your session is secure, to creating databases, interacting with other websites, and allowing deeper functionality. A back end web developer is tasked with writing out the code that makes these technologies and functions work. Their job responsibilities include:

Responsibilities include:

- Designing and implementing methods of data storage, as well as managing these databases and storage methods
- Overseeing all server-side web application logic, and ensuring that the server is stable and continues to operate with zero downtime
- Coding the back-end to ensure that front-end packages work as intended
- Documenting changes to code on the back end of a website, and recording detailed documentation of all changes
- Creating and implementing security systems to ensure the website is safe and stable
- Debugging code and resolving issues with back-end functionality
- Rewriting and improving code to improve the speed and efficiency of systems
- Implementing new technologies to optimise the website's speed and functionality, or to expand its capabilities
- Creating and maintaining backups of all important information and code

Full stack web developer

Full stack developers are web developers who are experts in the wide range of technologies that a website needs to function. These professionals deal with all parts of the web development cycle, from programming everything you see and interact with on the front end of a website, to creating the systems and databases on the back end that allow the website to complete complex tasks.

The responsibilities of a full stack developer include:

- Conceptualising, planning and modelling the requirements for building websites
- Creating the front end of a website, including user interactions and the site's visual layout
- Uploading or updating the copy, images, and other content of the website
- Coding the back end of a website using an appropriate stack of technologies
- Creating the servers and databases that will be used by the back end's functions
- Designing and developing Application Programming Interfaces to be used on the website
- Optimising the speed and functionality of all web content across a range of operating systems, browsers, and platforms, as well as on mobile devices

Software engineer

Large software systems require heavy high-level planning to ensure that code is written in a structured manner. Creating highly structured, meticulously documented code allows for the code to be easily understood and altered (if needed). Software engineers are responsible for creating these highly ordered systems. Just like civil engineers who plan, oversee, and implement the construction of buildings, software engineers conceptualise, direct and create the software we all use on a daily basis.

Responsibilities include:

- Conceptualising innovative ways to solve problems, based on a deep understanding of the problem and detailed knowledge of existing tools and methods
- Creating systems and software using up-to-date programming conventions and modern technology stacks
- Testing, validating and documenting all software and systems
- Directing the overall development and programming of software or systems
- Tracking and analysing data, using this information for systems optimisation
- Installing or implementing new frameworks, technology stacks, or software to improve performance
- Documenting all key changes, software, architecture, and other related operations
- Testing and debugging software to resolve issues and optimise performance

Structure of the bootcamp

This immersive bootcamp begins with the foundational essentials of programming and web development. Master the basics of creating web pages and web programs with a variety of coding languages, frameworks and tech stacks. Then progress to more advanced concepts in programming and create highly advanced websites and software applications.

Bootcamp preparation and application

In this preliminary stage, you'll start to learn the most essential concepts of programming that are required to begin your coding journey. You'll complete a short application that assesses your logical thinking and problem-solving skills, and submit a personal essay motivating your application for our immersive bootcamp program.

Level 1: Programming and Web Development Basics

Work through the fundamentals of programming and web development, as you learn how to create basic programs and web pages using HTML, CSS, SCSS, and JavaScript.

Level 2: Advanced Programming Concepts

Improve and refactor your code and extend the capability and efficiency of your programs as you learn more advanced programming techniques, including algorithms, hashing, and database creation and management.

Level 3: Database Skills

Explore different types of databases, develop your skills in designing and managing them, and practice essential problem-solving techniques.

Level 4: Advanced Web Development with the MERN Stack

Build a powerful set of skills for both front end and back end web development, and learn how to incorporate the MERN stack into your web applications for increased functionality.

Post-Bootcamp Career Support

After you've completed the bootcamp, you'll continue to receive career support and guidance, including interview preparation, CV review, and direct referral to our hiring partners.

Outcomes of the bootcamp

This immersive bootcamp is structured to teach you the core tenets of front-end and back-end web development, and the essentials of software engineering, before progressing to more advanced concepts in both fields. Over the duration of the bootcamp, you'll develop a deep and broad understanding of both web development and software engineering.

Once you've completed the Immersive Bootcamp, you will be able to:

- Understand essential programming concepts taught in JavaScript.
- Apply basic web development concepts in HTML, CSS, and SCSS.
- Make use of advanced JavaScript concepts like jQuery, JSON, and DOM manipulation.
- Employ in-depth version control with Git, GitHub, and Docker.
- Understand a wide range of software engineering concepts taught in Java, including Object-Oriented Programming, recursion, and algorithms.
- Create and manipulate relational databases using SQL.
- Use PHP to manage server-side functions, and employ SQL Server to access relational databases and create plugins for WordPress sites.
- Understand and use various advanced concepts in full stack web development using the MERN stack (MongoDB, Express, React, and Node).
- Build a rich portfolio, with a detailed technical CV and fully developed professional LinkedIn profile to increase your employability.

The intensive and more demanding nature of this application-only, immersive bootcamp means that you'll be faced with a wide range of tech challenges and given the knowledge and tools to solve them. With our unique human code-review support, you'll have around-the-clock access to expert guidance, review, and feedback on your work.

The code you submit for each task is reviewed by an expert code reviewer within 36 hours of submission. This industry expert will help you to fine-tune your code, to take the efficiency and quality of the programs that you create to a high industry-aligned standard. What's more, 6 cohort check-ins will ensure that you're excelling in all aspects of the bootcamp, whether it's the core curriculum or your larger capstone projects.

Take the next step towards a successful career in tech. Enrol in the Immersive Bootcamp quality assured by The University of Manchester and gain the skills, knowledge, and support you need to thrive in the digital marketing world. Apply now and start your journey to becoming a confident and skilled coder.

We hope to see you online soon to embark on your learning journey as a budding Skilled coder!

The University of Manchester is collaborating with online education provider HyperionDev to offer a portfolio of high impact outcomes-oriented online bootcamps. The partnership aims to broaden access to tech education through an engaging human-led online model.