

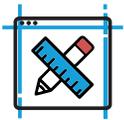


Web Development Flex Program

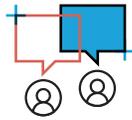
Curriculum Package

The Lighthouse Labs Web Flex Program Experience

Digital skills are revolutionizing nearly every industry across the world. With the demand for effective, creative software developers increasing daily, we want to do our part to train the next generation of tech talent. With Web Flex, we're expanding our mission of making tech more accessible and inclusive. This is personalized, outcomes-driven web dev training that meets you where you're at. Every module of this program is designed to guide you through becoming the most effective and impactful developer you can be.



**Cutting-Edge
Industry-Driven
Curriculum**



**Personalized &
Immersive Education**



**Wide Stack of Necessary
Modern Technologies**



**Hands-On, Collaborative
Learning Environment**

Your Web Flex Journey Will Guide You Through:

- Effectively troubleshooting and debugging problems in web development
- Demonstrating problem-solving skills by creating basic algorithms for coding challenges
- Critically analyzing the benefits and limitations of coding solutions and ideas
- Understanding the components that constitute a web application
- Contributing to full-stack web apps using modern patterns, tools, and workflows
- Knowing how computer science concepts are applied to web development
- Effectively working collaboratively on web development projects
- Employing learning strategies that enable you to continue to build your skillset



Our annual **Student Outcomes Report** is proof that our outcomes-obsessed curriculum works. 97% of eligible job-seeking graduates of our Web Development Bootcamp obtain employment after graduation, with 98% of them working as developers. We bring this same successful approach to all our programs and curriculums.

Learn How to Learn

Our curriculum is carefully crafted in alignment with industry trends and the expertise of tech leaders to bring you exactly what you'll need to succeed as a developer. Through Web Flex, you'll learn how to learn through a creative, personalized, outcomes-oriented structure.

The goal is to set you off with the tools you need to be effective, adaptive, and curious in your career as a developer. With this in mind, we orient our curriculum around three main pillars of knowledge that are essential for software development.

Web Flex Pillars



Application Development

Accessible, clean code
Deployment and hosting
UX/UI

Modern languages, frameworks,
and libraries
Pair programming &
collaboration



Computer Science

Algorithm Design
Data structures & trees
Recursion & automation

Object-oriented programming



Software Engineering

Test-driven Development
Critical analysis & evaluation
of software

Source code version control
& organization
Modularity & testability

Immersive & Collaborative Learning

Being a web developer is all about collaboration. In your career, you'll need to work alongside other developers to craft and iterate software, websites, and applications. We designed our curriculum with this team-centric approach in mind.

Pair Programming

Pair programming is a software development technique where two developers will work in tandem on a project. Within Web Flex, you'll partner with peers during weekly sessions to encourage the all-important peer-to-peer, social learning.

Group Projects

Within the midterm and final projects, you'll work in close collaboration with your peers to build robust web applications. You'll utilize Git and Github workflow practices to establish responsive, critical, and effective teamwork strategies and processes.

Build Out Your Developer Portfolio

Core Curriculum Projects

Our disruptive and outcomes-obsessed educational approach flips traditional methodologies on their head. Here you'll spend 70% of your time working on programming, because that's how you'll be able to actually learn in a deep, meaningful way. Every module contains a mini-project that helps you build, strengthen, and consolidate your skills.

Midterm & Final Projects

Web Flex contains two major projects, midway through the program and at the end. During these projects, you'll collaborate with your peers to apply the skills you've been learning throughout the program.

These projects are great opportunities to build up your budding developer portfolio, learn how to apply techniques and processes, and solve problems in a creative environment. Through them, you'll establish effective team workflows and dynamics, learn how to tailor communication and presentation to audience type, and above all, flex your coding skills.

Consolidate Your Knowledge

Research & Reflect

Students have opportunities to deepen their understanding of complex technical concepts through communicating them in accessible ways. Minor projects will have students researching and analyzing topics relevant to the curriculum, then communicating them through article writing. They also have the optional opportunity to publish the article as a blog, to add value to their professional portfolio.

Technical Interviews

Demonstrating your knowledge of a thing can be just as challenging as learning the thing in the first place. Students will be able to prepare for the technical interviews they'll partake in after graduation through mock sessions. Within these sessions, they'll be able to practice skills and learn to present complex knowledge in accessible, clear-cut ways, which will additionally help them learn more deeply. Expert mentors will guide them through and point out areas of improvement.

Our Skills Stack

We use technologies that are aligned with cutting-edge industry trends and standards. We're always consulting with our massive community of tech leaders and experts, mentors, and alumni to perfect how we teach our students to learn. Teaching multiple programming languages is essential to our goal of equipping students with the ability to work critically, creatively, and effectively.



JavaScript

JavaScript is the universal programming language of the web. You'll become familiar with solving problems using the language and writing client-side scripts to create dynamic content.



Networking & HTTP

It's critical to understand the distinctions between client and server-side code and the responsibilities each carries. Learn the fundamentals of HTTP, how to interpret its codes, and how to use it to retrieve data.



HTML, CSS, & more

HTML and CSS are essential components for the web. Learn to use this duo to write, modify, and read code in well-structured, easily-maintained ways, and apply the techniques of responsive web design..



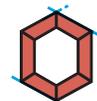
Node.js & React JS

JavaScript is better with its tools. Learn to use Node.js and React to increase JavaScript's usefulness. Using Node, execute scripts outside of a web browser. Apply the React library and its tools, including automated testing, to build stronger user interfaces.



SQL & Relational Databases

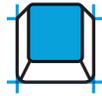
Learning the fundamentals of relational databases and how to interact with them is essential for designing web applications. SQL can be used to expertly manage the data held in relational databases.



Ruby on Rails

This dynamic duo of language & framework is one of the most widely used and polished modern technologies for web development. You will gain familiarity with Rails core concepts, like the MVC design pattern, and how to communicate with databases to persist data.

Curriculum Breakdown



Prep Work

- The Command Line
- Version Control
- Environment setup
- Introductory JavaScript & HTML



Programming Fundamentals

- JavaScript foundations
- FOCAL Solutions
- Code-Writing methodologies
- Stylistic & Organizational improvements
- First Principles, Control Flow
- Dependency management, callback functions
- Recursion & Promises



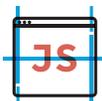
Networking & HTTP

- Client vs. Server
- HTTP Foundations
- Requests & Status Codes
- HTTP APIs & Clients
- GET & POST



Web server Development with Node

- Node.js
- Express
- Overcome HTTP statelessness
- User authentication best practices
- Middleware pattern
- RESTful server endpoints



Front-End Fundamentals

- HTML
- CSS
- JavaScript
- SASS Application
- Responsive Web Design techniques
- jQuery & AJAX
- DOM Elements



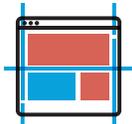
Relational Databases & SQL

- Key components of Relational databases
- Primary & Foreign keys in database table design
- One-to-Many vs. Many-to-Many relationships
- SELECT statements
- Asynchronous JS libraries
- Database documentation



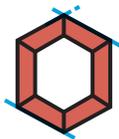
Midterm Project

- Git & GitHub workflow
- Team Collaboration
- Presentation to Technical & Non-technical audiences
- Practice & Apply technical skills learned so far



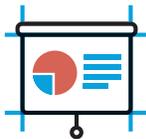
React & Automated Testing

- Build Single Page Application features using React library & tooling
- Use AJAX alongside React
- Data manipulation & JSX component rendering
- Write unit & e2e tests with Jest and Cypress



Ruby on Rails

- MVC architecture
- ORM ActiveRecord
- Database migrations
- Class-based Object-oriented programming



Final Project

- Collaboration, teamwork, and problem-solving skills
- Source code management using Git & Github
- Tailor communication & presentation approach to audience
- Apply all learned technical skills to web application project

Pave Your Pathway to a Stronger Career

The responsive and personalized help students get from our Career Services team will help bridge the gap between training and working.



Personalized Coaching

Our team will work with you to map out a rigorous career plan, then help you achieve it.



Resume & Interview Help

Detailed feedback and tips will help you perfect your points of contact with potential employers.



Connect with Employers

Tap into our wide network of leading tech employers through events, networking, and more.

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A career as a developer can be really fast-paced. That's why we're not just teaching our students how to code, we're also teaching you how to learn to code in an efficient and critical way. The end of the program isn't the end of your learning journey; it's more like the beginning.

That's why we're here to help you connect with fulfilling employment that'll keep you developing your abilities and building up your skillset on the job. Our robust and expert Career Services team will support you all the way through your professional development journey, guiding you through growth even after you leave Lighthouse.

Staying Connected After Graduation



Our Community

As an alumni, you'll be a part of the massive and always-growing Lighthouse community forever. Between Slack conversations and exciting virtual events, our alumni community is always buzzing with activity.

Whether you want to network with like-minded community members, or recruit people for a hackathon event, you'll always be welcome in the alumni community.



Lifelong Learning

After you graduate from the program, your access to the curriculum remains. You'll be able to revisit modules, projects, and activities anytime you want, forever. Plus, you'll have access to post-program stretch challenges, which will enable you to extend your learning beyond the confines of the program.

Your access to the learning platform will never expire. As we continue to iterate our curriculum to align with trends, you'll be able to learn from them alongside us.

Ready to code?

Apply Now



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