nucamp

Full Stack Web and Mobile Web Development

Learn front-end and hybrid mobile development, with server-side support, for implementing a multi-platform solution.

Overview

The first two courses in this Bootcamp cover front-end frameworks: **Bootstrap** and **React**.

You'll also learn to create hybrid mobile applications, using the **React Native**.

On the server side, you'll learn to implement NoSQL databases using **MongoDB**, work within a **Node.js**

environment and **Express** framework, and communicate to the client side through a RESTful API.

Learners enrolling in this Bootcamp are expected to have prior working knowledge of HTML, CSS and JavaScript.

4 Courses

At a structured pace, with the support of a dedicated Instructor and classroom environment.

Project Portfolio

Develop a restaurant website throughout the bootcamp, and work on your own project in groups or 2-3 students.

Certificate

Showcase your accomplishment after each course and the end of the Bootcamp.

Front-End Web UI Frameworks and tools: Bootstrap

Bootstrap

Bootstrap

Bootstrap is a giant collection of handy, reusable bits of code written in HTML, CSS, and JavaScript. It's a front-end development framework to quickly build fully responsive websites.

About the Course

This course will give you an overview of client-side web UI frameworks, in particular Bootstrap 4.

You will learn about grids and responsive design, Bootstrap CSS and JavaScript components. You will learn about CSS preprocessors, Less and Sass.

You will also learn the basics of Node.js and NPM and task runners like Grunt and Gulp.

At the end, you will be able to

1. Set up, design and style a web page using Bootstrap 4 and its components,
2. Create a responsive web page design, and
3. Make use of web tools to setup and manage web sites.

Front-end Web UI Frameworks Overview: Bootstrap

This module gives you a quick introduction to full-stack web development and the outline of the course. Then you will learn the basics of Bootstrap, setting up a web project using Bootstrap. You will learn about responsive design and the Bootstrap grid system. At the end of this module, you need to complete your first assignment.

Bootstrap CSS Components

This module concentrates on Bootstrap's components that are designed using pure CSS classes. You will learn about Navigation and Navigation bar. Then, you will learn about buttons, forms, tables, cards, images and media, tags, alerts and progress bars. At the end of this module you need to complete your second assignment.

Bootstrap JavaScript Components + JavaScript Review 1

This module concentrates on Bootstrap's JavaScript based components. You will learn about tabs, pills and tabbed navigation, collapse, accordion, scrollspy, affix, tooltips, popovers, modals and the carousel. At the end of this module you need to complete the third assignment.

Web Development Tools + JavaScript Review 1

This module rounds out our discussions on Bootstrap JavaScript components. Then we discuss CSS preprocessors, Less and Sass. Finally, we discuss building and deployment of our Web projects through task automation using NPM scripts, and task runners like Grunt and Gulp. The final assignment of this course needs to be completed at the end of this module.

Portfolio Project + JavaScript Advanced

This week, you will aim to complete your Bootstrap Portfolio Project, or as much of it as possible. You will also write a final report about your Portfolio Project, and you will share both your project and the report during the end-of-week workshop. Alongside this, you will begin to learn more advanced concepts in JavaScript, to help you prepare for the next course of your bootcamp, React.

Front-End JavaScript Frameworks: React

React

JavaScript is the most popular language for Web Development. React is the most popular JavaScript library that will make your applications more dynamic.

At the end, you will be able to

1. Be familiar with client-side Javascript application development and the React library
2. Be able to implement single page applications in React
3. Be able to use various React features including components and forms
4. Be able to implement a functional front-end web application using React
5. Be able to use Reactstrap for designing responsive React applications
6. Be able to use Redux to design the architecture for a React-Redux application

About the Course

This course explores Javascript based front-end application development, and in particular the React library.

This course will use JavaScript ES6 for developing React application.

You will also get an introduction to the use of Reactstrap for Bootstrap 4-based responsive UI design.

You will be introduced to various aspects of React components.

You will learn about React router and its use in developing single-page applications

You will also learn about designing controlled forms.

You will be introduced to the Flux architecture and Redux.

You will explore various aspects of Redux and use it to develop React-Redux powered applications.

You will then learn to use Fetch for client-server communication and the use of REST API on the server side.

A quick tour through React animation support and testing rounds off the course.

You must have preferably completed the previous course in the specialization on Bootstrap 4, or have a working knowledge of Bootstrap 4 to be able to navigate this course.

Also a good working knowledge of JavaScript, especially ES 5 is strongly recommended.

Introduction to JavaScript ES 6

This week, we will discuss more advanced topics in JavaScript in preparation for our dive into React.js. You'll learn about how to instantiate objects from classes, the concept of class inheritance, and the iteration-based array methods map, filter, and reduce.

WEEK 2

Introduction to React

In this module we get a quick introduction to front-end JavaScript frameworks and libraries, followed by an introduction to React. We will also learn about React components and JSX.

WEEK 3

React Router and Single Page Applications

In this week, you will learn about various component types. You will learn about React router and its use in designing single page applications. You will also learn about single page applications and use React Router to design single page applications.

WEEK 4

React Forms, Flow Architecture and Introduction to Redux

In this module you will be introduced to uncontrolled and controlled forms and briefly examine form validation in React applications. You will get an overview of the Flux architecture and introduced to Redux as a way of realizing the flux architecture.

More Redux and Client-Server Communication

In this module you will explore Redux further including Redux action, combining reducers, and Redux thunk, client-server communication using Fetch and the REST API. You will get a brief introduction to animation in React. You will also learn about testing, building and deploying React applications.

Multiplatform Mobile App Development with React Native

React Native

JavaScript is the most popular language for Web Development. React is the most popular JavaScript library that will make your applications more dynamic.

At the end, you will be able to

1. Build mobile applications targeting multiple platforms with a single codebase,
2. Leverage your HTML5, CSS, JavaScript and React skills, and
3. Use various features of the React Native and Expo SDK to build hybrid mobile applications
4. Use Redux to design the architecture for a React-Redux application

About the Course

This course focuses on developing truly cross-platform, native iOS and Android apps using React Native and the Expo SDK.

React Native uses modern JavaScript to get truly native UI and performance while sharing skills and code with the web.

You will learn about UI development with React Native UI and layout support and access the native mobile platform's capabilities from Javascript using the Expo SDK.

You should have already completed the Bootstrap 4 and the React courses in this specialization before proceeding with this course.

Hybrid Mobile App Development Frameworks: An Introduction

This module introduces you to hybrid mobile application development. You will learn about React Native and explore some of the features of React Native to implement a mobile app based on the React application that was implemented in the previous course on React.

WEEK 2

React Native UI Elements and Redux

This module introduces you to various React Native UI elements. We will look at how we can make use of these elements in designing the various views of our application. You will get an overview of the Flux architecture and introduced to Redux as a way of realizing the Flux architecture.

WEEK 3

React Native Alerts, Animations, Gestures, and Persist ReduxStore

In this module we look at enhancing the user experience through the use of animations and support for gesture-based interaction. We also look at persisting the redux state, and alerting the users.

WEEK 4

Accessing Native Capabilities of Devices: The Expo SDK

In this module you will explore the Expo SDK that enables you to access the native capabilities of the mobile devices. You will use a few SDK APIs in order to understand the general concepts and the patterns for using these APIs within your React Native application.

Server-side Development with NodeJS, Express and MongoDB

Commitment:
4 weeks of study
14-20 hours/week

NodeJS

You'll move on to a back-end language that will handle things like database operations, user authentication, and application logic. Node.js is a great option as it is just a JavaScript environment.

Express

You'll be able to develop complex applications: how to structure your code, where to host your large media files, how to structure the data in your database, where to perform certain computational tasks (client-side vs server-side), and much more.

MongoDB

When learning to build web applications, at some point you'll need to store data somewhere and then access it later. You'll learn how to use MongoDB database and access it via Node.js.

About the Course

This course deals with all things server-side. We base the entire course around the NodeJS platform.

 We start with a brief overview of the Web protocols: HTTP and HTTPS. We examine NodeJS and NodeJS modules: Express for building web servers. On the database side, we review basic CRUD operations, NoSQL databases, in particular MongoDB and Mongoose for accessing MongoDB from NodeJS.

We examine the REST concepts and building a RESTful API. We touch upon authentication and security. Finally, we review backend as a service (BaaS) approaches, including mobile BaaS, both open-source and commercial BaaS services.

At the end, you will be able to

1. Demonstrate an understanding of server-side concepts, CRUD and REST
2. Build and configure a backend server using NodeJS framework
3. Build a RESTful API for the front-end to access backend services

Introduction to Server-side Development

In this module you will be introduced to Node, Node modules and the Node HTTP server. You will learn about the Express framework and how to set up a REST API using Express.

WEEK 2

Data, Data, Where art Thou Data?

This module looks in detail at data storage with MongoDB, the popular NoSQL database. You will learn first about Express generator for scaffolding an Express application. Then you will learn about MongoDB. You will learn how to interact with MongoDB from a Node application. Then you will learn the Mongoose ODM to create schemas and models, and interact with MongoDB server.

WEEK 3

Halt! Who goes there?

This module is dedicated to user authentication. We first develop a full-fledged REST API server with Express, Mongo and Mongoose. Thereafter we examine basic authentication and session-based authentication briefly. We then develop token-based authentication with the support of JSON web tokens and the Passport module.

WEEK 4

Backend as a Service (BaaS)

In this module we learn about Mongoose population, a way of cross-referencing documents and populating the documents from other documents. We then review secure communication using HTTPS. We look at Backend as a Service (BaaS) and take a brief look at Loopback.

Project Portfolio

About the Project Portfolio

This Bootcamp offers a structured path for you to develop a fully functional and feature rich project portfolio.

You will be asked to start with identifying the project you would like to build, based on a market analysis of needs, and will quickly move to a prototyping phase.

With every new course and technology, you will improve your project to make it more responsive, data-driven, mobile-friendly and finally connect it with a back-end and host it on a cloud platform.

You will be invited to work in groups and offered a weekly rhythm to progress.

Authentic, trustworthy graduate outcomes

So you can have fair expectations.
Data is **updated daily online** from our graduate survey responses.

~80%

~75%
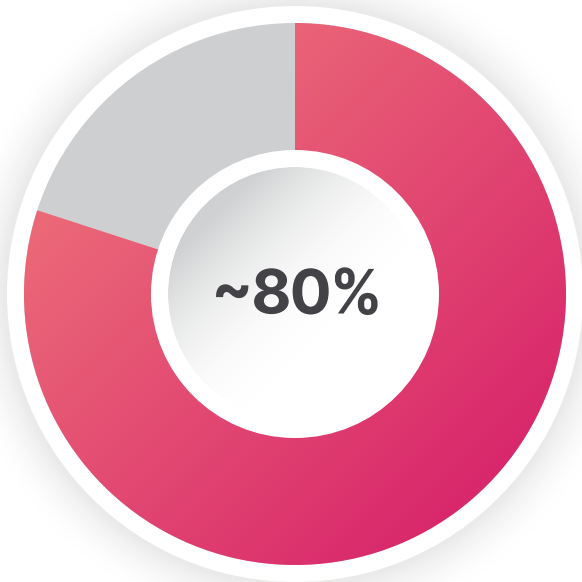
Employment Rate

~80% of graduates are working in tech after 6 months.
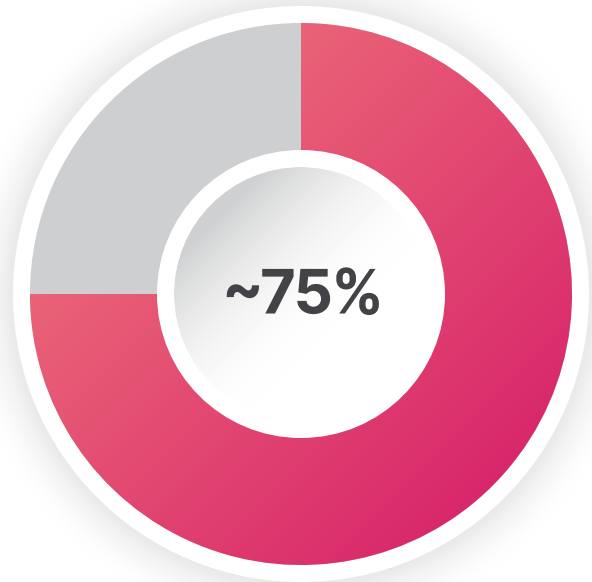
Graduation Rate

~75% of students graduate

Career Services

You'll receive unmatched career support after you graduate so you can focus on your learning today.

About the Project Portfolio

Once you graduate from a Nucamp Bootcamp, we'll connect you with a Career Coach to guide you through the job search process. Our Career Coaches are also Nucamp Instructors who have the expertise and knowledge to help with your career preparation. You'll receive ongoing best practices, answers to common questions, and a valuable one-on-one coaching session to help you land the job that's right for you.

Establish a winning career search plan by joining the Career Development program

Nucamp graduates have access to a Career Development Course that guide them in the job-seeking process, with activities and assignments to help get on track toward a career in development.

Get hands-on Career Preparation so that recruiters can see the best of what you offer

Your Career Coach will review your resume and GitHub profile and provide feedback so that recruiters can more easily find you and connect your relevant skills to their needs. Coaches will also help you prepare for interviews so that you can present your best and they will review your portfolio projects to help highlight your best skills.

Get exclusive access to a nationwide Job Board tailored to Nucamp graduates

Every month we reach out to 1,000+ companies to gather junior developer positions that are a good fit for Nucamp Graduates. In addition to working with large companies, we've expanded the list of opportunities by also including small-to-medium sized companies who have exciting jobs in smaller cities.

Land your dream job with a free month of LinkedIn Premium

With over 20 Million job listings, LinkedIn Premium helps you get noticed by potential employers, get connected to managers and recruiters, and get an edge with career search insights. You'll also get access to LinkedIn Learning so you can expand your professional skills further.

Stay connected with Nucamp Alumni on LinkedIn

Once you graduate from a Nucamp bootcamp, you are invited to an exclusive LinkedIn Alumni group where you can connect with other graduates and start building your own professional network. Nucamp alumni are a vibrant community that are actively engaged in helping each other develop professionally.

Keep your skills sharp with Lifetime Access to Course Content and Community

Can't remember exactly how to implement a specific function or do you just need some more practice? Review specific course subjects or take a course all over again so you can keep your skills sharp. Enrolling in a Nucamp bootcamp gives you lifetime access to course content and the community at no extra cost.

Stand out from other job seekers by participating in a Nucamp Hackathon

Nucamp has collaborated with MintBean to provide Nucamp graduates an opportunity to participate in an online Hackathon every month. Join a hackathon to sharpen your skills and demonstrate to recruiters that you can solve real world coding challenges.

Establish a winning career search plan

Soon after you graduate, you'll receive a employment survey in your email. Once you complete the survey, your career services program will be activated and you can take our 6-week career development course.

Pay as low as $10/month until graduation with a Fair Student Agreement

Don't give up **15%** of your future salary. Nucamp FSA is the smarter way to join a coding bootcamp.

Best Deal

Pay 5 times $376 Interest Free

$1,880 Total Cost

$376 at registration

Payments begin on the first day of class

5 total payments of **$376**

+ Register

Faster Repayment

Pay $103 - $158/mo in 12 to 18 months

$2,433 Total Cost

$100 Registration Fee

Payments begin on the first day of class

then 18 monthly payments of **$128-$135**

OR

12 monthly payments of **$189-$196**

+ Apply

Most Flexible

Pay $10 - $17/mo until graduation

$2,561 Total Cost

$100 Registration Fee

Payments begin on the first day of class

5 monthly payments of **$12-$25**

then 18 monthly payments of **$128-$135**

OR

12 monthly payments of **$189-$196**

+ Apply

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SYLLABUS: FULL STACK WEB AND MOBILE DEVELOPMENT

Register for this bootcamp

Write a new chapter in your life story, just like they did

Nucamp Coding Bootcamps provide the **knowledge** and the **structure** to help you switch into a coding career. We're talking to people just like you, every week, who are making the change.

Lori Haffelt
Clearwater, FL

Previous Job:
Retired Nuclear Medicine Tech

Current Job:
Bootcamp Instructor,
Nucamp

Stephanie Raymos
Sacramento, CA

Previous Job:
Affiliate Marketer

Current Job:
Software Engineer,
RL Liquidators

Zach Ballard
Knoxville, TN

Previous Job:
High School Biology Teacher

Current Job:
E-Learning & Development Specialist,
Purdue Global University

Hayat Mohammed
Dallas, TX

Previous Job:
Sales and Management

Current Job:
Web Developer & Funnel Expert,
Oshi Web Solutions

Mecca Adams
Chesapeake, VA

Previous Job:
TV Producer

Current Job:
Software Analyst,
Snap Inc., DoD Agency

Nic Addelia
Des Moines, IA

Previous Job:
High School Band Director

Current Job:
Software Engineering
Principal Financial Group