
The Valley Bootcamp

Full-Stack Web Development Course

Instructor

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Overview

The Valley Bootcamp is a coding boot camp based out of Bangalore. We excel in providing high quality, hands on training by industry experts. Our students undergo rigorous training in software development and advanced topics. We try to bridge the growing gap between graduation and employment.

Goals

- Develop a strong foundation in programming fundamentals.
- Understand the concepts of object oriented programming.
- Understand, develop and architect API's.
- Become an expert in databases and ORM (object relational mapping.)
- Learn MVC, most of the webapps are built around this architecture.
- Build, execute and deploy web applications.
- Learn the intricacies of coding and how it fits into different scheme of things.
- Study most of the fundamentals of computer science.
- Become an expert in data structures and algorithms.
- Become an algorithm expert.

Syllabus

The Full Stack Web Development course is aimed at teaching you the technologies that are used to build powerful, multi-user web applications. We will cover Reactjs on the front-end and NodeJS + MongoDB on the backend. We will go through how a rest api works, how APIs are used all over the web today to power multi-platform applications and build a few along the way.

Week	Topic
Week 1	Install Ubuntu / VirtualBox Explore Linux commands and shell scripting Introduction to HTML and CSS. Setup Slack, GitHub, Google Drive
Week 2	Object Orientation <ul style="list-style-type: none">Get some experience with oops concepts.
Week 3	Object relational mapping and SQL.
Week 4	Introduction to Ruby, Javascript etc.
Week 5	Rack <ul style="list-style-type: none">This part is dedicated to teach students about http and how internet works around it.In this week, students learn how http servers are built and learn about status codes, http request/response objects etc.Create servers that listen to HTTP requests and respond with well-formed HTML responses.
Week 6	Sinatra <ul style="list-style-type: none">Sinatra is a Domain Specific Language (DSL) written in Ruby for building web applications on top of Rack.Gain exposure to design patterns in web applications.
Week 7	Rails <ul style="list-style-type: none">With a foundation in the Ruby language as well as the architecture of the World Wide Web, students utilize Rails to build complex, functional web applications from the ground up.Learn the file structure of Rails, how to set up their own databases, how to draw routes and create Rails forms, gain an understanding of the asset pipeline, and bring it together by integrating front-end design skills. etc.
Week 8	React <ul style="list-style-type: none">Using plain JavaScript with large web applications quickly becomes unruly and unmanageable. Initially created by Facebook,

	<p>React is the premier JavaScript framework for building fast web user interfaces.</p> <ul style="list-style-type: none">• Learn the fundamentals of components.• Learn how to build a webapp using react.• Build applications that effortlessly consume APIs, render data quickly, and scale as application complexity increases.
Week 9	<p>Node JS and Express JS</p> <ul style="list-style-type: none">• Discover how to design, build, test and deploy a RESTful api using Node.js and mongo. Learn about data modelling, querying data with mongoose, using json web token, and more.• Learn how to get started with Express.js, a minimalistic framework which sits on top of node.js and allows you to build powerful websites and webapps.
Week 10	<p>Data Structures and Algorithms.</p> <ul style="list-style-type: none">• At this point of time, we dive into interview preparation mode.• We cover all data structures like Trees, Linked List, Stack etc.• We go through all important coding questions.• We also help you understand some of the important algorithms which are needed to crack interviews.
Week 11	<p>Cloud Computing and AWS.</p> <ul style="list-style-type: none">• We go through the basics of cloud computing. Advantages and disadvantages of it etc.• You will deploy your webapps in EC2 instances, use dynamoDb for persistence.• We will also use S3 and Lambda.
Week 12	<p>Final Project Demo</p>

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