

# **Web4Jobs by Qwasar Full Stack Program Full Time**

## **Course Packet**

### **Introduction**

Web4Jobs by Qwasar Silicon Valley offers a competency-based certification program in the Full Stack Development field. The Web4Jobs by Qwasar Full Stack Developer program will teach students the scope of skills necessary to become a full stack developer. Full stack development is about building software applications, websites, and mobile apps, focuses on both the front-end (what the application actually looks like) and the back-end (how files, data, and algorithms work and are structured).

This program focuses on front-end and back-end development, as well as strong fundamentals in data structures and algorithms. Learners will cover fundamental computer programming concepts including arrays, strings, algorithms, pointers, hash data structures, and software architecture, before moving on to focusing on front-end and back-end languages including Ruby, Ruby on Rails, Javascript, HTML, CSS, Typescript, React, PostgreSQL, PHP, REST APIs, and Liquid. Our projects include a focus on databases, intermediate object oriented design, and deploying to the cloud. Learners are also expected to complete 30-40 technical interview role plays to prepare for real job interviews, and undergo resume and cover letter reviews similar to peer code reviews. Overall, our Full Stack Development program is designed to train learners to Silicon Valley standards in full stack development with an emphasis on

structured problem solving, critical thinking, and extensive preparation for meeting employer demands for entry-level jobs.

#### Students Will Learn...

- Front-end and back-end programming,
- Ruby on Rails,
- Javascript,
- Advanced SQL database knowledge,
- RESTful APIs, software architecture,
- Structured problem solving and debugging,
- Data structures and algorithms
- SEO
- SQL, SQLite, and databases
- Wordpress, Shopify, and website CMSs
- Cloud-hosting and app deployment
- Extensive use of industry-standard tools such as Git, IDEs, and terminal commands.

## What to Expect

### **Remote training program**

Students will gain experience building and developing software. By the time students complete the program they will earn an industry-standard certification in Full Stack Development from Web4Jobs by Qwasar.

### **No tests, only projects.**

Each focus of this program will involve completing projects in teams as well individually to ensure students are learning and applying their knowledge.

### **Build apps and sites with groups and on your own**

Complete end-to-end software projects that cover both front-end and back-end development. Build software applications and websites in common content management systems. Work in groups and complete individual portfolio projects.

### **Showcase projects to recruiters**

Students will showcase approximately 5 to 20 projects representing thousands of lines of code for employers and interviews.

### **20-hour-per-week time commitment**

Students will need to devote 20 hours a week minimum in order to fully learn the content necessary to pass the course and become a data scientist.

### **Interview training**

As part of this program, students will complete technical interviews to prepare for job applications. Students will be guided on how to navigate challenging technical interviews including whiteboard coding.

### **Write ~30K lines of code across 20 projects**

On average, students will write about 30,000 lines of code as they complete exercises, software projects, and coding challenges throughout the program. This high-quantity coding means students develop confidence in their code and applied software architecture design and implementation experience.

## Course meeting schedule

Level	Season	Project	Description
LEVEL 1 – NOOB 3 MONTHS	Preseason	Bootcamp Javascript	
	Preseason	My bouncing box	
	Preseason	My css is easy	
	Preseason	My first backend	Build api that replies to different routes, URL naming structures
	Season 1	Project 1: Bootcamp C	The coding environment, using the terminal functions, loop statements, types, variables, pointers and strings, arrays and pointers, memory allocation/structures, basic and more complex algorithms, a nested loop with if statements, advanced shell, pipe, multiple commands, 2D arrays and strings
	Season 1	Project 2: Printf	Unlimited arguments, conversion between types and bases
LEVEL 2 – APPRENTICE 3 MONTHS	Season 2 Full Stack	Bootcamp Ruby	Basic algorithms, strings, arrays, 2D strings and arrays, the syntax of Ruby and its classes and library of functions
	Season 2 Full Stack	My CSS is Easy I	Basic CSS styling, creating responsive CSS webpage, flexbox, float, and some basic HTML
	Season 2 Full Stack	My Select Query	Interchanging arrays, strings, and a CSV file: data manipulation.
	Season 2 Full Stack	My CSS is Easy II	CSS stylesheets, bootstrap 4, grid system, responsive design using the grid system, bootstrap classes, use of headings
	Season 2 Full Stack	My SQLite	Rebuild an SQL database; SQL classes, database structures, where statements, and the following functionality: insert, update, sort or order, delete.
	Season 2 Full Stack	My Users App	A simple app with an interface, a database, user accounts, and user management including account update, account password reset, and account deletion/destruction.
	Season 2 Full Stack	Bootcamp JS (Javascript)	Basic algorithms, strings, arrays, 2D strings and arrays, the syntax of Javascript and its classes and library of functions
	Season 2 Full Stack	My Tetris	Rebuild the classic video game Tetris in Javascript; game movement logic, how to render a game with player's interactive movements, and intermediate software architecture

	Season 2 Full Stack	My Basecamp 1	Rebuild a simple project management application with user registration and management, user permission and permission management, and task/project creation and management
	Season 2 Full Stack	My Green Wordpress	Setup and customize a wordpress installation with a custom theme, a custom plugin, SEO, and cache for acceptable site speed. Must be in PHP
LEVEL 3 – CONFIRMED 3 MONTHS (SELECT OPTION)	Season 3 Front-end Full Stack	Bootcamp ReactJS	
	Season 3 Front-end Full Stack	My Pokemon App	Build a directory/library of Pokemon characters that loads quickly (thanks to lazy loading). Users can "explore more" about each individual Pokemon character by going to a character's page/profile. Users can also search for a pokemon by its name using a search bar
	Season 3 Front-end Full Stack	My Yelp	Deploy an application built in ReactJS to the cloud using Amplify (AWS). Code for the app is provided: the project focuses on deploying to the cloud and requires working with REST APIs.
	Season 3 Front-end Full Stack	My Instagram	Build an application similar to Instagram including: account creation and management, posting, interacting with posts, interaction amongst users, hashtags, video and audio display/play, bookmarking, messaging and communication, groups, and more. This is a large-scale front-end project that requires project management and strong planning skills.
	Season 3 Front-end Full Stack	My Dropbox	Build an application similar to Dropbox using specific tools on AWS highly common to full stack applications. Understand how serverless services work, how to use them, how to connect them, and build an interface in ReactJS and CSS while deploying to the cloud.
	Season 3 Back-end Full Stack	My Basecamp 2	Add new features to Basecamp 1: attachments for a project or task, discussion thread and thread creation, messaging within a thread and message access/permissions
	Season 3 Back-end Full Stack	My API	Build a backend project that provides an API that other developers could use to integrate with your project. Decide what framework and cloud tools to use to deploy and host your project.
	Season 3 Back-end Full Stack	My Yelp	Deploy an application built in ReactJS to the cloud using Amplify (AWS). Code for the app is provided: the project focuses on deploying to the cloud and requires working with REST APIs.
	Season 3 Back-end	My Dropbox	Build an application similar to Dropbox using specific tools on AWS highly common to full stack applications.

<p>Season 3 Cloud Engineer Full Stack</p>	Full Stack		Understand how serverless services work, how to use them, how to connect them, and build an interface in ReactJS and CSS while deploying to the cloud.
	Season 3 Cloud Engineer Full Stack	My Fully Managed API	Build a backend project that provides an API that other developers could use to integrate with your project. The API must be built using available cloud tools, not coded on your own.
	Season 3 Cloud Engineer Full Stack	My Yelp	Deploy an application built in ReactJS to the cloud using Amplify (AWS). Code for the app is provided: the project focuses on deploying to the cloud and requires working with REST APIs.
	Season 3 Cloud Engineer Full Stack	My Dropbox	Build an application similar to Dropbox using specific tools on AWS highly common to full stack applications. Understand how serverless services work, how to use them, how to connect them, and build an interface in ReactJS and CSS while deploying to the cloud.
	Season 4	Final Project	