Self-Paced Bootcamp
Java, MERN, C#, Python

Self-Guided course format
Mentorship check-ins provided
2-4 Month course access

Over 4,500 alumni, hired by tech companies worldwide

*As of Feb 2018 alumni data
Python

Full Stack Development

MySQL

Intro to MySQL
- Database Design & Relationships
- Entity Relationship Diagrams (ERD)
- Database Normalization
- MySQL Workbench & Querying
- Conventions & Common Data Types
- How to Use ERDs
- Using a Database with Your UI
- Recreating ERDs*

Python

Intro to Python
- Variables, Data Types & Best Practices
- Using Strings & Built-in String Functions
- List Creation & Manipulation
- Using Tuples & Built-in Tuple Functions
- How to Use Dictionaries in Python
- Conditionals, Operators, & Nested Loops
- Constructing Functions in Python

Python OOP

Intro to Object Oriented Programming
- Creating Objects & Classes
- Adding Properties/Attributes to Classes
- Constructing & Adding Methods to Classes
- Chaining Methods & Using Magic Methods
- How to Use Modules & Packages in Python
- Creating Multiple Objects
- Updating Methods with ‘Super’

Python Test Driven Development (TDD)
- Unit Testing in Python & Outcomes
- How to Use Assertions Using TDD Methods: setUp & tearDown

Advanced Python
- How to Use Multiple Arguments
- Ternary Operators in Python
- Using Lambda
- Overriding Inheritance & Polymorphism
- Using Composition Over Inheritance

Flask

Intro to Flask
- Routing in Flask Applications
- Building & Using Forms
- Rendering Templates & Views
- Delivering Static Content
- The Different HTTP Methods
- Implementing Cookies & Sessions
- Hidden Inputs & Form Validation

Flask w/ SQL
- Import, Export, & Connect Python Across Files
- Connecting & Running Python Across Files
- Database Communication & Validation
- Encryption & Data Security Basics

Pylot MVC

Intro to Pylot Model View Controller (MVC)
- Views, Session Classes & Session Data
- How to Use Models with Controllers
- Data Validation with Pylot
- Using Bcrypt with Pylot MVC
- How to Use Multiple Controllers & Models

Deployment
- Amazon Web Services (EC2)
- Linux
- PostgreSQL

*Optional topics
Java Fundamentals
Intro to Java
  - Java Development Kit Installation
  - Executing Java Programs
  - Variables, Data Types, & Type Casting
  - Control Structures & Exceptions

Java OOP
Intro to Object Oriented Programming
  - Creating Objects & Classes
  - Methods, Member Variables & Constructors
  - Overloading & this
  - Inheritance & Packages

Advanced Java OOP
  - Use of Static
  - Interfaces & Abstract Classes
  - Annotations
  - Java Beans

Data Structures*
  - Doubly Linked Lists
  - Tries

Java Web Development
Java on the Web
  - Servlets & Web Containers
  - Query Parameters
  - Java Servlet Pages
  - Light MVC Patterns
  - Session & POST Patterns

Java Spring
Spring Fundamentals
  - Spring Overview
  - Spring Tool Suite
  - Intro to Spring Boot
  - Spring MVC Apps

Spring Data I & II
  - MySQL Connections
  - Repositories & Spring Data - JPA
  - Persistent Model Annotations
  - Relationships
  - Advanced Queries

Spring Security
  - Spring Security Overview
  - Authentication & Authorization
  - Servlet API Integration
  - Spring MVC Integration

Deployment
  - Amazon Web Services (EC2)
  - Linux
  - PostreSQL

*Optional topics
**JavaScript**

**Fundamentals**
- Declaring & Referencing Variables
- Variable Hoisting in JavaScript
- Conditionals, Operators, & Nested Loops
- Using Arrays & Loops in JavaScript
- Objects, Functions, & Function Scoping
- Variable Hoisting with Scoping
- Return Statements in JavaScript
- Function Hoisting

**JavaScript OOP**
- How to Use Object Constructors
- Common Constructors: ‘This’ & ‘New’
- Private Methods & Variables
- Creating Prototype Objects in JavaScript
- Best Practices for JavaScript OOP

**Advanced JavaScript**
- How to Use Callbacks
- Delegating Functionality & Event Handling

**Node.JS**

**Intro to Node**
- How to Use Package Managers (NPM/Bower)
- File System Module & HTTP
- Making a Full Web Sever
- How to Work with Node Modules
- Common & Useful Node Modules

**Modularization**
- Using Require & Module.exports
- How to Modularize Existing Projects

**Express.JS**

- Render Templates With Express View Engines
- HTTP Methods: Forms, Data Transfers, & Routing

**Socket.io**

- Applications with Real-time Communication

**MongoDB**

**MongoDB & Mongoose**
- MongoDB Overview, CRUD Ops
- Intro to Mongoose
- Dependencies in Mongoose
- Mongoose Communication with MongoDB
- Mongoose Methods
- Data Validation with Mongoose
- Create Associations Between Mongo Objects
- RESTful Routing with Mongoose & Express

**React**

- Create React App
- Class Based Components
- Props, Children, Synthetic Events
- State, LifeCycle Methods
- Functional Components
- useState, useEffect, useReducer
- context API

**Deployment**

- Amazon Web Services (EC2)
- Linux
- Production Environments
- Heroku

*Optional topics*
C# Fundamentals
Intro to C#
- .NET Core Console Applications
- Variables, Types, Type Casting, & Functions
- Control Structures
- Debugging .NET Core Applications (VS Code)

C# OOP
Intro to Object Oriented Programming
- Classes & Objects
- Access Modifiers
- Inheritance & Polymorphism
- Encapsulation with Properties

Advanced C# OOP
- Interfaces
- Abstract Classes
- Generics

Data Structures
- Singly Linked Lists
- Doubly Linked Lists
- Tries

ASP.NET Core
- Dependency Injection with ASP Services
- MVC Architecture
- Razor View Engine
- View Modeling
- Extension Methods
- Custom User Authentication/Authorization

Object Relational Mapping (ORM)
- Working with ORMs
  - LINQ
  - Dapper
  - Entity Framework Core

Identity Framework Core
- User Authentication/Authorization
- Identity Roles
- Third Party OAuth

Deployment
- Amazon Web Services (EC2)
- Linux
- Production Environments
- Hosting with Nginx/Supervisor

*Optional topics