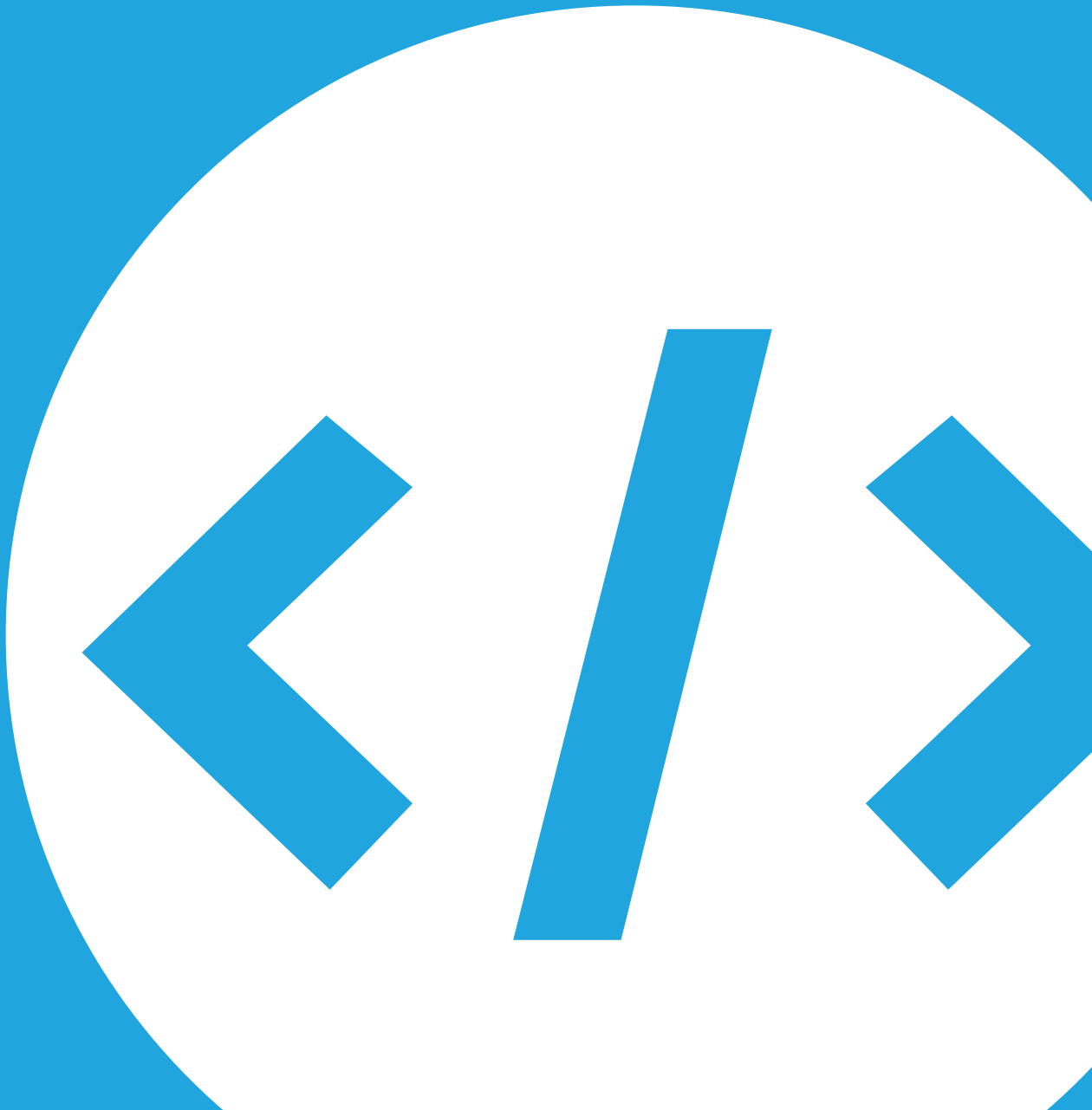


FULL- AND PART-TIME PROGRAMS

WEB DEVELOPMENT





*Start out with finding the right problem to solve. This is a combination of ‘what customers are asking for,’ ‘what customers don’t even know they want yet,’ and ‘what can be solved with something simple to understand and manage.’ – **Radia Perlman***

The US Bureau of Labor Statistics says web development job opportunities will grow 27% by 2024. For the tech industry, startups, and established companies that want to innovate, a skilled developer is vital.

Our web development track focuses on Ruby on Rails. RoR enables developers to get products to market quickly compared to other languages. For the fast-paced tech world, this means that companies can have an edge; for our students, this means that their skills are in-demand and highly employable. Using Rails as a vehicle, the web development coursework encourages logic and problem-solving skills that will enable you to overcome challenges no matter what language you’re working with.

The program begins with the fundamentals of model-view-controller architecture. Lesson delivery includes a series of Rails labs and opportunities to work on real project deliverables, both individually and collaboratively. Weekly workshops will give you exposure to topics such as test-driven development, git, AJAX, and APIs. Throughout the program, you’ll engineer deliverables that prove your abilities as an effective developer and teammate.

Key Skills And Capabilities

- Setting up a dev environment: brew, Xcode, RVM, git
- MVC basics: intro to model-view-controller architecture
- Building and testing a Rails application
- Source control management and cloud-based deployment
- Employing collaborative approaches to overcome coding challenges





WEB DEVELOPMENT CURRICULUM

FULL-TIME PROGRAM

Pre-work (1-4 weeks)	Development principles Programming basics for non-programmers Intro to Ruby on Rails		
	Web Development Curriculum	Core Curriculum	Network & Immersion Activities
Week 1	Introduction to curriculum & track deliverables Setting up your environment How to use GitHub effectively	Introductions & program overview Immersing yourself in the tech community Startup growth & fundraising Alumni Q&A panel Innovation culture Event networking Your résumé is a story Introduction to EQ	Fireside chats Alumni happy hour IdeaHack
Week 2	Git & web architecture Agile development Building a Rails app	Get to know your hiring partners Ideal job description & positioning statement Résumé/LinkedIn workshoping Communication styles Mentor sessions	Fireside chats Coffee chats Partner project kick-off
Week 3	REST, CRUD, APIs Code Review Big Data	Your personal narrative Pipeline to follow-up Introverts & extroverts Mentor Sessions	Fireside chats Coffee chats Hiring Partner Fair Partner project
Week 4	Authentication, validation, & basic testing Code review Field visit/shadow day	Interview styles Mock interviews Situational leadership Mentor sessions	Fireside chats Coffee chats Hiring Partner Fair Partner project
Week 5	Mailers & dashboards	Network assessment & action plan Negotiating salary & equity Mentor sessions	Fireside chats Coffee chats Partner project
Week 6	Authorization & AJAX Categories Code Review	How to give & receive feedback Mentor sessions	Fireside chats Coffee chats Open Doors Party Partner project
Week 7	Styling & catching up Principles of web security	Public speaking workshop Pitch practice Mentor sessions	Fireside chats Coffee chats Partner project presentations
Week 8	Presentations The integrated team: cross-track knowledge share	Pitch practice Mentor sessions The alumni experience Onboarding to digital alumni career tool	Talent Exposition
Post-grad (8 weeks)	Career coaching & support		

| Technical skills
 | Industry immersion
 | Career development
 | Culture skills
 | Mentorship
 | Networking
 | Cross-disciplinary work

NOTE: Coursework and timing may differ by location. Other topics could be covered based on student needs and emerging business trends.



WEB DEVELOPMENT CURRICULUM

PART-TIME PROGRAM

Pre-work (1-4 weeks)	Development principles Programming basics for non-programmers Intro to Ruby on Rails		
	Web Development Curriculum	Core Curriculum	Network & Immersion Activities
Week 1	Curriculum overview Guiding principles of web development Rails application structure	Introductions & program overview Goal setting & action plans Alumni Q&A panel	New student happy hour
Week 2	Introduction to web architecture Development processes and Agile	Mentor sessions	Coffee chats
Week 3	Getting started with Git & other tools Building a Rails app: Part 1 Debugging tools	Crafting a career theme Agile & lean methodologies Idea Hack Mentor sessions	Fireside chats Coffee chats Partner project kick-off
Week 4	Building a Rails app: Part 2 Code reviews & the peer review process Building a Rails app: Part 3	Mentor sessions	Coffee chats Partner project
Week 5	REST, CRUD, & APIs Code reviews: Part 2 Big data	EQ & communication styles Introverts & extroverts Your personal narrative Résumé/LinkedIn workshoping Event networking Mentor sessions	Fireside chats Coffee chats Partner project
Week 6	Cyber security Authentication & validation Basic testing	Mentor sessions	Coffee chats Partner project
Week 7	Problem solving processess Building a Rails app: Part 4 Mailers & dashboards: Part 1	Mock interviews Résumé/LinkedIn workshoping Mentor sessions	Fireside chats Coffee chats Partner project
Week 8	Mailers & dashboard: Part 2 Authorization & AJAX	Mentor sessions	Coffee chats Partner project
Week 9	Categories Code reviews Styling & catching up	Presentation skills Mentor sessions	Fireside chats Coffee chats Hiring Partner Fair Open Doors Party Partner project
Week 10	Code reviews & time to build	Pitch practice Mentor sessions	Coffee chats Partner project
Week 11	Code reviews	Pitch practice Negotiating salary & promotions Mentor sessions	Coffee chats Partner project presentations
Week 12	The integrated team: crosstrack knowledge share	Mentor sessions	Talent Exposition
Post-grad (8 weeks)	Career coaching & support		

Technical skills
Industry immersion
Career development
Culture skills
Mentorship
Networking
Cross-disciplinary work

NOTE: Coursework and timing may differ by location. Other topics could be covered based on student needs and emerging business trends.



“

Programming can be learned on your own. Motivation and learning to work with others is a different story. Startup Institute helped put me in a room with other passionate and driven individuals who taught me how to collaborate and pushed me to want to get better. I find that experience to be invaluable in my day-to-day work.

– Brice Lin, Software Engineer, Spotify

COURSEWORK

Pre-Work: Virtual Learning Resources

(1-4 weeks prior to your start date, dependent upon your experience level)

Hit the ground running with our suite of virtual learning resources. Whether you're a programming novice or already have some coding experience, we'll provide you with lesson guidance and online learning options to get you up-to-speed with the fundamentals of back-end development. Lessons include: Development Principles, Programming Basics for Non-Programmers, Intro to Ruby on Rails, and more.

NOTE: A full four weeks of preliminary work may be required for those with no technical experience.

Your First Assignment: Get Coding

Skill-up for the web development track with exercises in Ruby, object-oriented design, and basic algorithms and data structures. Serious about your code? There will be no shortage of supplementary resources to get you hacking before the course begins.

Rails Application Structure

The program begins with an in-depth look at the Rails application structure, MVC, dynamic client-side behavior, writing tests, git branching, and debugging.

Getting Started with GitHub

Learn about version control and why it's important. Tour GitHub and its main features, focusing on how it aids great developers and development teams. Create a static webpage project using HTML, CSS, and JavaScript files, then check your project into git and push to GitHub.

Development Processes

Explore various development methodologies, such as agile, scrum and waterfall, and how these practices strengthen team dynamics while enabling new products to get to market faster. Delve into the development process behind a product that your instructor built to see and investigate both applications of and divergences from these practices. Consider which processes to apply to your own project and begin to execute on these ideas.

REST, CRUD, & API's

Scope your track project, architecture resources, and understand how routing is related. Gain experience with CRUD storage functions and understand their roles in creating database-driven web apps, while leveraging RESTful APIs to develop a more performant, maintainable, and scalable service.

Building a Rails App

Explore the architecture of the web, breaking down key concepts of web development, RoR, and open-source frameworks. Then, build your first Rails app with the support of an expert practitioner and David Kehoe's *Learn Ruby on Rails*.

COURSEWORK

Code Reviews

Get formal feedback on your code from practitioners and learn from the work of other members of your track.

Authentication, Validation, & Basic Testing

Learn how sessions, browser cookies, and flashes persist data between requests, and how authentication is built in Rails. Explore the different components required in an authentication system and learn about the most common authentication solution, Devise. Learn to ensure only valid data is saved to your database and how to troubleshoot validation errors.

Mailers & Dashboards

Set up a mailing framework from the command line in Rails. Discover how mailers are similar to controllers and models, how to pass instance variables from the mailer to the mailer view, and how to send email directly from the console.

Authorization & AJAX

Understand the nuances between authorization and authentication and implement a role-based authorization with Devise. Create a simple “voting” system in Rails. Apply AJAX in a RoR setting and explore ActiveRecord.

Categories

Understand key terminology and be able to apply “has_many associations” in both Rails and SQL. Discover how to seed data, then practice changing seed data to a variety of categories on your own. Create a category resource and send category data for your track project.

Styling

Learn best practices and hacks for styling a Rails application using a framework like Bootstrap. Learn how to upload images and menus to a cloud service, and implement these stylistic adjustments on your application.

The Integrated Team

Product teams can't work in silos. To optimize performance and opportunities, employees need to be clear on how each member of the team fits into the big picture. In this session, you'll collaborate with students from other tracks to discover how your roles integrate and communicate.

Track Deliverables

- GitHub repo
- Reservster app or a project of your choice

WEB DEVELOPMENT GRADUATES ARE EMPLOYED BY:



GET IN TOUCH

Want to talk? We're here to answer your questions and help you determine if our program is right for you.

Email: info@startupinstitute.com

Phone: 888-425-5557

CONNECT WITH US



A close-up, slightly low-angle shot of a young Black man with a mustache, smiling broadly and looking towards the left. He is wearing a white button-down shirt. The background is blurred, showing what appears to be an office or modern interior with white structural elements.

Building an inspired workforce,
knowing the world is a better place
when people do what they love.

STARTUP
INSTITUTE

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SIDV-SYL17-V01 04/2017



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