Rust Bootcamp

Write the first review

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TIME TO COMPLETE:
6h 17m

LEVEL:
Intermediate

TOPICS:
Rust

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Start

Rust Bootcamp

Course Overview

Welcome to our comprehensive Rust programming course! In this immersive learning experience, we will guide you through every aspect of Rust, empowering you to become a proficient developer.

This course is ideal for beginners wanting to become proficient in Rust or from existing developers coming from languages like Python or JavaScript that want to learn Rust fundamentals.

Get started by setting up your preferred text editor and installing Rust. We'll ensure that you have all the necessary tools to create a productive coding environment. By leveraging the capabilities of Visual Studio Code and enabling the Rust Analyzer, you'll unlock a feature-rich ecosystem that enhances your development workflow.

Experience the game-changing potential of GitHub Copilot, an AI-powered assistant. Sign up for GitHub Copilot and witness its transformative impact on your coding experience. We'll guide you through the installation process and show you how to leverage its intelligent suggestions for accelerated programming.

Master concepts and fundamentals like control flow, variable assignment, and immutability. Learn the intricacies of loops, conditional statements, and effective error handling techniques. With Rust's borrowing concept at your disposal, you'll develop secure and high-performance code.

Build upon your foundation with advanced topics like structs, string manipulation, and working with vectors and enums. We'll explore real-world library development using Cargo, Rust's robust package manager. Effective documentation and debugging techniques will become second nature as you optimize your code.

Organize your code effectively with modules, extending functionality and enhancing reusability. Dive into comprehensive testing methodologies to ensure the reliability and correctness of your programs. From writing tests for your code to handling private components, you'll gain expertise in developing robust software projects.

Our immersive learning experience includes hands-on examples, interactive exercises, and practical projects. Rust's performance, safety, and expressiveness will be at your fingertips as you embrace its immense potential. Join us on this rewarding journey to unlock the power of Rust programming and propel your career forward.

Enroll now and gain the skills, knowledge, and expertise to thrive in the world of Rust. Whether you're a beginner, coding novice, or an experienced developer seeking new horizons, our course is your gateway to writing elegant, reliable, and high-performance code. Embrace the possibilities of Rust and embark on a rewarding programming journey today with one of the most loved programming languages.

Learning Objectives

1. Gain a solid understanding of Rust's core concepts, including variable assignment, control flow, and immutability, to write efficient and reliable code.
2. Master the utilization of powerful development tools such as Visual Studio Code and the Rust Analyzer, enhancing productivity and enabling seamless coding experiences.
3. Explore GitHub Copilot and learn how to leverage its AI-driven suggestions to accelerate programming and boost code quality.
4. Develop proficiency in working with advanced Rust features, such as structs, enums, and string manipulation, to build robust and flexible applications.
5. Discover the intricacies of module organization and extend functionality through effective code structuring, promoting code reusability and maintainability.
6. Acquire comprehensive testing skills, including writing tests for code components and handling private code, ensuring the reliability and correctness of Rust programs.
7. Gain hands-on experience in real-world library development using Cargo, Rust's package manager, and become proficient in documenting code and debugging techniques.

These compelling learning objectives will guide you through the course, helping you acquire essential skills and knowledge to become a confident Rust developer.

Course Content

This course is divided into 4 weeks with 3 lessons that contain about 6 videos each. Each video is about 5 minutes long and contains a hands-on demonstration of the concepts covered in the lesson. The course is designed to be taken in order, but you can jump to any lesson you want to learn more about.

Week 1: Setting up your development environment

Reference GitHub Repository

- Setting up your text editor
- Using GitHub Copilot with Rust
- Introduction to GitHub Codespaces for Rust

Week 2: Rust fundamentals

Reference GitHub Repository

- Introduction to Rust
- Loops and Control flow
- Function basics

Week 3: Structs, Types, and Enums

Reference GitHub Repository

- Using structured data
- Exploring strings and vectors
- Working with Enum and Variants

Week 4: Applying Rust

Reference GitHub Repository

- Building a real-world library
- Extending functionality with modules
- Testing Rust code

About your instructor

Alfredo Deza has over a decade of experience as a Software Engineer doing DevOps, automation, and scalable system architecture. Before getting into technology he participated in the 2004 Olympic Games and was the first-ever World Champion in High Jump representing Peru. He currently works in Developer Relations at Microsoft and is an Adjunct Professor at Duke University teaching Machine Learning, Cloud Computing, Data Engineering, Python, and Rust.

With Alfredo's guidance, you will gain the knowledge and skills to build with the Rust programming language.

Resources

- **Deploy Rust on Azure Functions**

- **DevOps command-line tools in Python and Rust**

- **Switching to Rust from Python**

- **First Steps with Rust Learning Path**