



# Rust and what's this thing for?



Abc Xyz  
@dura\_lex

1. Foreword
2. What is Rust?
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The background of the slide is a light gray network pattern. It consists of numerous small, dark gray circular nodes connected by thin, light gray lines. These lines form a complex web of triangles and other polygons, creating a textured, mesh-like appearance across the entire page.

## Foreword

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- Since 1.0.0
- Scope (by time)
  - Bindings (FFI — foreign function interface)
  - Analyzers
  - CLI (TUI) tools for PC and IoT
  - GUI for fun
  - Libraries
  - RE
- Nim, Crystal, Zig, Pony





# What is Rust?

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«**Rust** is a multi-paradigm systems programming language focused on safety, especially safe concurrency».

— Wikipedia

«*Rust is a systems programming language that runs blazingly fast, prevents nearly all segfaults, and guarantees thread safety*».

— [www.rust-lang.org](http://www.rust-lang.org) (2015)



*«Empowering everyone to build reliable and efficient software».*

— [www.rust-lang.org](http://www.rust-lang.org)

The background of the slide features a complex, light gray network pattern. It consists of numerous small dots (nodes) connected by thin, intersecting lines (edges), creating a web-like or molecular structure that fills the entire frame. The pattern is more dense in some areas and more sparse in others, with lines crisscrossing at various angles.

## What is Rust?

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What's wrong with systems languages?

# What's wrong with systems languages?

- It's difficult to write secure code
- It's very difficult to write multithreaded code

Rust?

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# What is Rust?

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Quick facts about Rust

- Started by Mozilla (sponsorship & support) employee Graydon Hoare
- First announced by Mozilla in 2010
- Community driven development
- 88,281 commits on GitHub
- First stable release: 1.0 in May 2015
- Latest stable release: 1.31

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# What is Rust?

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Why Rust?

- Performance
  - Fast, memory-efficient
  - No runtime or garbage collector
  - Zero-cost abstractions
- Reliability
  - Rich type system
  - Ownership model
- Productivity
  - Documentation
  - Friendly compiler
  - Top-notch tooling

(Un)safe

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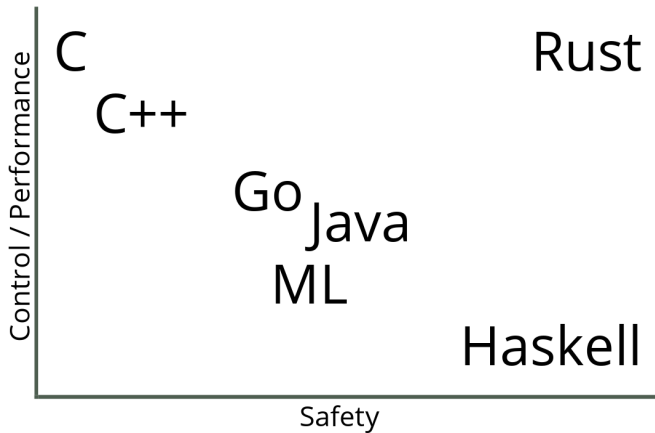




(Un)safe

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Control vs Safety

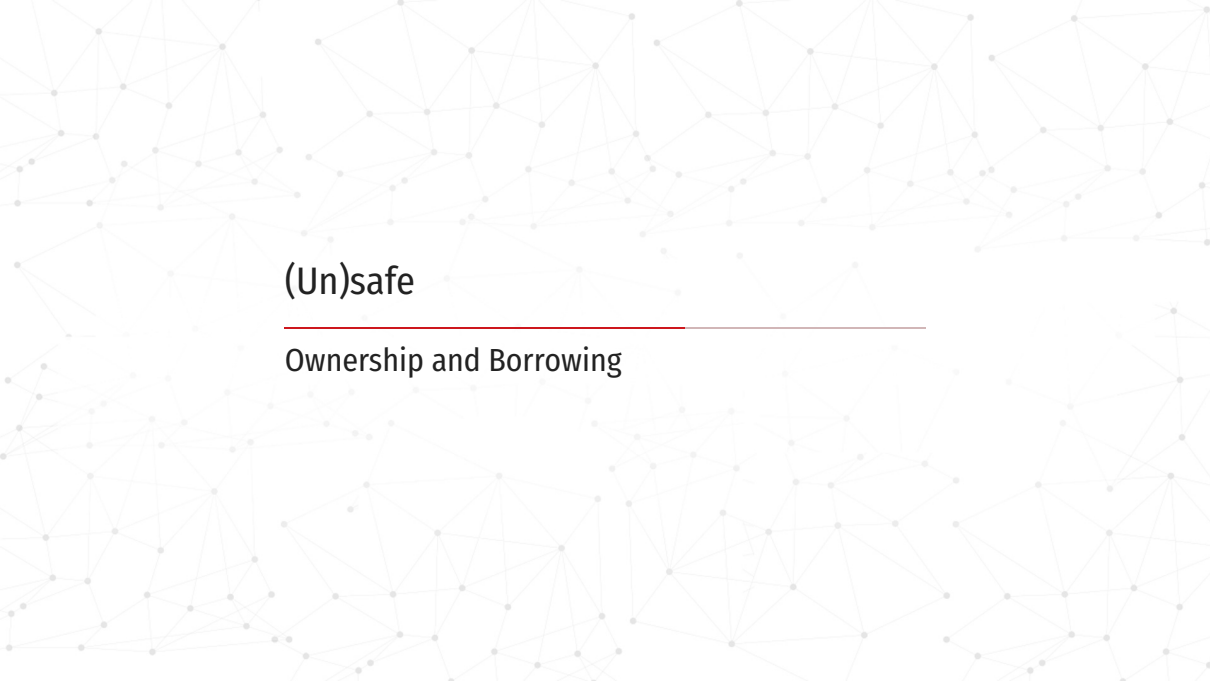


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(Un)safe

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Problems

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(Un)safe

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Ownership and Borrowing



# Features

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# Syntax

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# Ecosystem

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Ecosystem

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Community



Meetups

telegram

Rust in week

gitter

reddit

IRC

matrix

ru, en, all

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Ecosystem

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Rustup

The background of the slide is a light gray network pattern. It consists of numerous small, dark gray circular nodes connected by thin, light gray lines. These connections form a complex, web-like structure that fills the entire background, with some areas appearing denser than others.

Ecosystem

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Cargo



Cross platform

Tests

Benchmarks

Examples

Docs

The background of the slide features a complex, light gray network pattern. It consists of numerous small dots (nodes) connected by thin, intersecting lines (edges), creating a web-like structure that fills the entire frame. The density of the connections is higher in some areas and lower in others, giving it a dynamic, organic feel.

Ecosystem

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Additional tools

cargo:

- fuzz - format - llvm - asm - graph - deps - etc

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# Ecosystem

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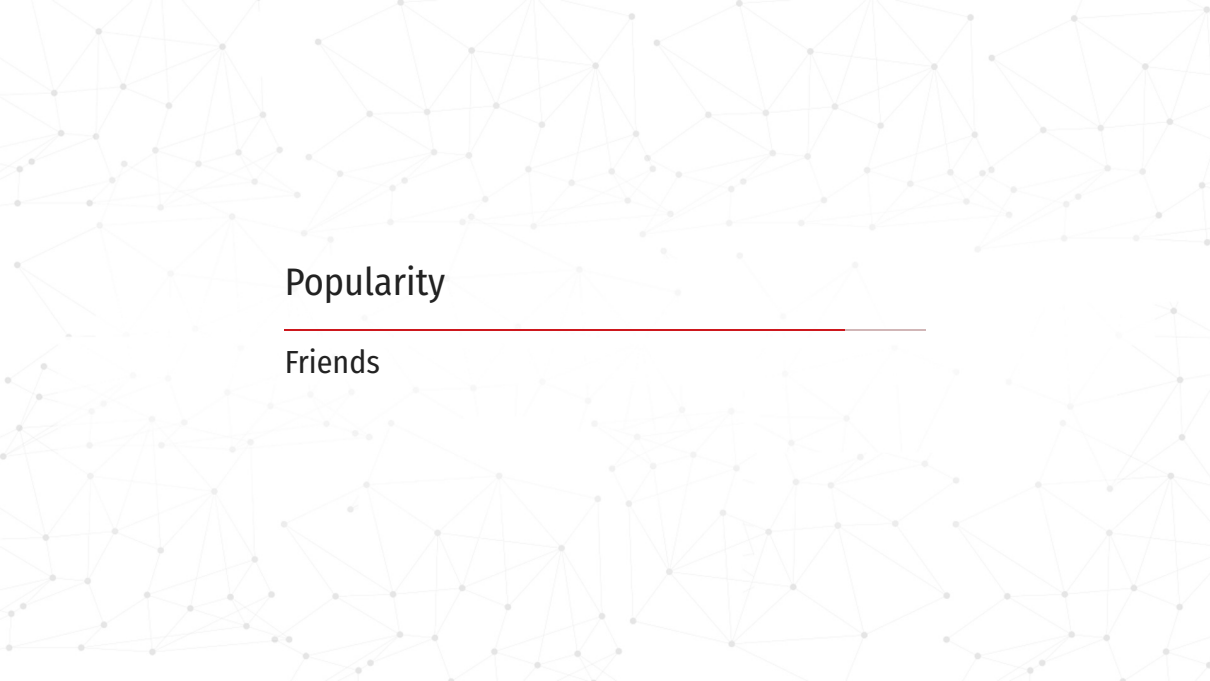
## IDE



The background of the slide is a complex network diagram. It consists of numerous small, dark grey circular nodes scattered across the white space. These nodes are interconnected by a dense web of thin, light grey lines, creating a mesh-like or web-like structure that fills the entire background.

# Popularity

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The background of the slide is a complex network diagram. It consists of numerous small, light-gray circular nodes scattered across the entire surface. These nodes are interconnected by a web of thin, light-gray lines, creating a dense, interconnected mesh that resembles a social network or a data structure. The overall effect is a subtle, textured background that complements the text.

Popularity

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Friends

The background of the slide features a complex, light gray network pattern. It consists of numerous small, dark gray circular nodes connected by thin, light gray lines, creating a web-like structure that fills the entire frame. The density of the connections varies, with some areas appearing more clustered than others.

# Popularity

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Popular software

- CLI tools
- Web
- Servo

# Summary

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Questions?

