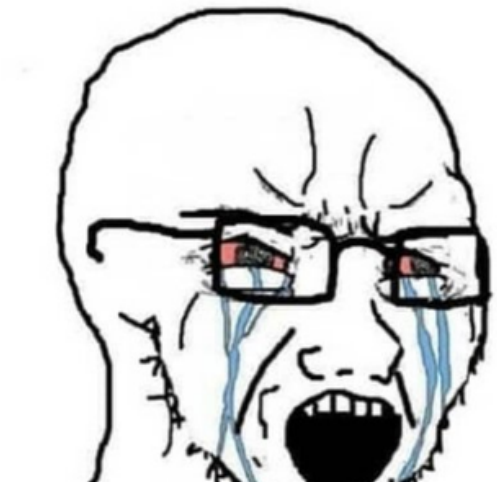
Rust presentation

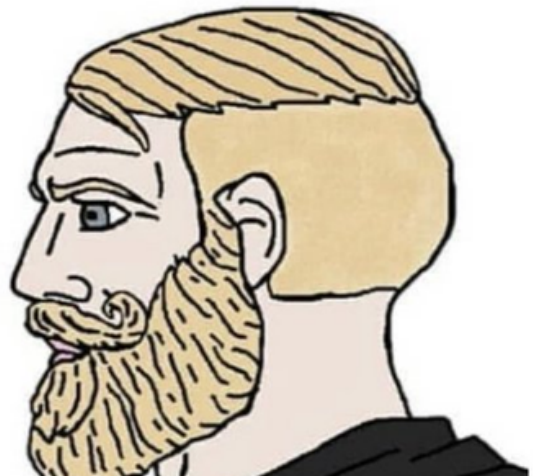
Why Rust

- **Both safe and performant. No tradeoffs.**
- Zero cost abstractions!
- Both low-level and high-level

  Write mostly high-level code, go low-level when you need it!
- Memory safety

  Eliminate entire classes of bugs at compile time! You **can't** corrupt memory when using safe Rust!





Getting started

How install?

Use rustup.rs. It lets you install multiple versions of rust. Usually you'll use stable but sometimes you might want to use features that are still unstable and available only on nightly. Also clippy and rustfmt are parts of the toolchain.

Linux

Install via your package manager or https://rustup.rs/ if it's not in your distro's repositories. The website installer will automatically prompt you to install the stable toolchain. If you installed rustup via package manager, install stable toolchain: `rustup toolchain install stable`.

Windows

Install via https://rustup.rs. To use MSVC backend, which is recommended, you'll need to have installed either Visual Studio 2015+ C++ workload or VS C++ build tools standalone if you don't use visual studio.
You can also use MinGW, but it won't be covered here.

Learing Rust

Basics

Fearless concurrency

Crates

Other good sources

- I am a Java, C#, C or C++ developer, time to do some Rust
  Comprehensive introduction to Rust for developers of other Object Oriented languages
- Declarative memory management
  How Rust memory management differs from C or C++
- Learn Rust in Y minutes
- Rust Book

Other tips

- Use clone
- Use clippy

Sources

- https://fasterthanli.me
- https://www.youtube.com/c/fasterthanlime
- https://www.youtube.com/c/JonGjengset
- https://pkolaczk.github.io
- https://www.reddit.com/r/rustjerk