Existing libraries

_This document contains preliminary research into the existing geospatial libraries rust has to offer. _

Note

- Rust's name for an external library is `crate`.
- Rust uses `https://crates.io` to host these crates.
- we will only look for libraries published on crates.io.
    - It makes sense to do so. if it is on crates.io, we can ensure the library is properly open source. If a library exists, but it is not properly open source, then it should be disregarded.

searches:

- https://github.com/topics/computational-geometry
- https://crates.io/search?page=2&q=geometry&sort=recent-downloads

finds:

- geojson: https://crates.io/crates/geojson
- euclid: https://crates.io/crates/euclid
- ncollide3d: https://crates.io/crates/ncollide3d
- kurbo: https://crates.io/crates/kurbo
- piet: https://crates.io/crates/piet

more finds (ordered by popularity)

Link	**Crate**	**Number of downloads**	**Last Update (as of 2021-04-29)**
https://crates.io/crates/geo	geo		
https://crates.io/crates/geo-types	geo-types		
https://crates.io/crates/geojson	geojson		
https://crates.io/crates/geohash	geohash		
https://crates.io/crates/geographiclib-rs	geographiclib-rs		
https://crates.io/crates/postgis	postgis		

These are the most used packages. Geo contains the usual suspects like `Point` and `LineString`. https://docs.rs/geo-types/0.7.2/geo_types/

Aha, most of these are created in one ecosystem: GeoRust. Jackpot!

georust: https://github.com/georust / https://georust.org/

https://lib.rs/crates/geo

bindings & early projects

- https://github.com/georust/gdal
- https://github.com/georust/proj
- https://github.com/georust/rstar
- https://github.com/georust/geocoding