

# Add Planar Layout to retworkx



- Overview of retworkx
- Overview of Rust
- Planar Layout

# Add Planar Layout to networkx



networkx - a general purpose graph library for Python 3

- Written in Rust for performance and safety
- Originally developed to improve DAG operations in Qiskit
- Now a general-purpose graph library used by Qiskit and other apps

# Add Planar Layout to retworkx



## Rust language

- Fast, memory-efficient
- No runtime or garbage collection
- Rich type system and ownership model
- Memory and thread safety
- Most errors discovered at compile time

## Planar Layout for Qiskit – networkx issue #438

- Planar layout can be displayed in 2D with no intersecting edges
- Application to coupling map display in Qiskit
- First must determine if graph is planar. Developed in [networkx/#475](#) by @georgios-ts
- This project is to create the planar embedding and then convert it to a position dictionary for display