

# R, mappeR, and shiny

---

George Clare Kennedy

June 9, 2025

University of Iowa

- **R** is a popular programming language for data wrangling and visualization
- Many **packages** — collections of functions — available through central CRAN repository
- Link: <https://www.r-project.org/>

- **mappeR** is an R package available on CRAN which implements the Mapper algorithm.
- It is meant to succeed Paul Pearson's **TDAMapper** package, which is no longer being updated and was removed from CRAN in 2022.
- Canonical link (documentation lives here as well):  
<https://cran.r-project.org/package=mappeR>
- Link to Pearson's TDAMapper:  
<https://github.com/paultpearson/TDAmapper/>

- **Shiny** is a web framework for developing applications in R (and recently, Python).
- Official website: <https://shiny.posit.co/r/>

- Shiny + mapper = shinymapper, an application which lets you interactively mess with Mapper parameters
- Github link: <https://github.com/gergill/shinymapper>
- RStudio: <https://posit.co/downloads/>
- Running with RStudio: download all files from repo into a folder. Open the folder as a new project in RStudio.