

A complex network diagram with black and white nodes and edges, serving as a background for the top half of the slide. The nodes are represented by circles of varying sizes, and the edges are lines of varying thicknesses connecting them. The overall structure is dense and interconnected.

Final Considerations

Network Modeling for Epidemics

Day 5

A solid blue horizontal bar at the bottom of the slide.

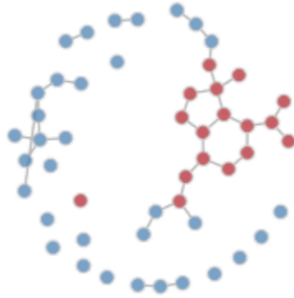
Main EpiModel Website

[EpiModel](#) [Team](#) [Tutorials](#) [Workshops](#) [Details](#)

EpiModel

Mathematical Modeling of Infectious Disease Dynamics

EpiModel is an R package that provides tools for simulating and analyzing mathematical models of infectious disease dynamics. Supported epidemic model classes include deterministic compartmental models, stochastic individual contact models, and stochastic network models. Disease types include SI, SIR, and SIS epidemics with and without demography, with utilities available for expansion to construct and simulate epidemic models of arbitrary complexity. The network model class is based on the statistical framework of temporal exponential random graph models (ERGMs) implemented in the [Statnet](#) suite of software for R.



Installation

The current software version is **EpiModel v2.0.2**, which may be downloaded from [CRAN](#) and installed in R through:

```
install.packages("EpiModel", dependencies = TRUE)
```

The development version of EpiModel is hosted on [GitHub](#) and may be installed via the remotes package by:

```
remotes::install_github("statnet/EpiModel")
```

The software source code is available at the [Github Repository](#). Users should submit bug reports and feature requests as issues there. The [Releases](#) page on the repository lists all the changes to the software over time.

EpiModel 2.0 Update

In July 2020, we released EpiModel version 2.0. This major software package update incorporates a substantial number of changes to many elements of the EpiModel infrastructure and application programming interface (API). We anticipate some minor backwards incompatibilities with any EpiModel code developed with versions 1.x. There is a migration document available in the [Tutorials](#) page.

Citation

If using EpiModel for teaching or research, please include a citation of our software with:

Jenness SM, Goodreau SM and Morris M. EpiModel: An R Package for Mathematical Modeling of Infectious Disease over Networks. *Journal of Statistical Software*. 2018; 84(8): 1-47.

Getting Started

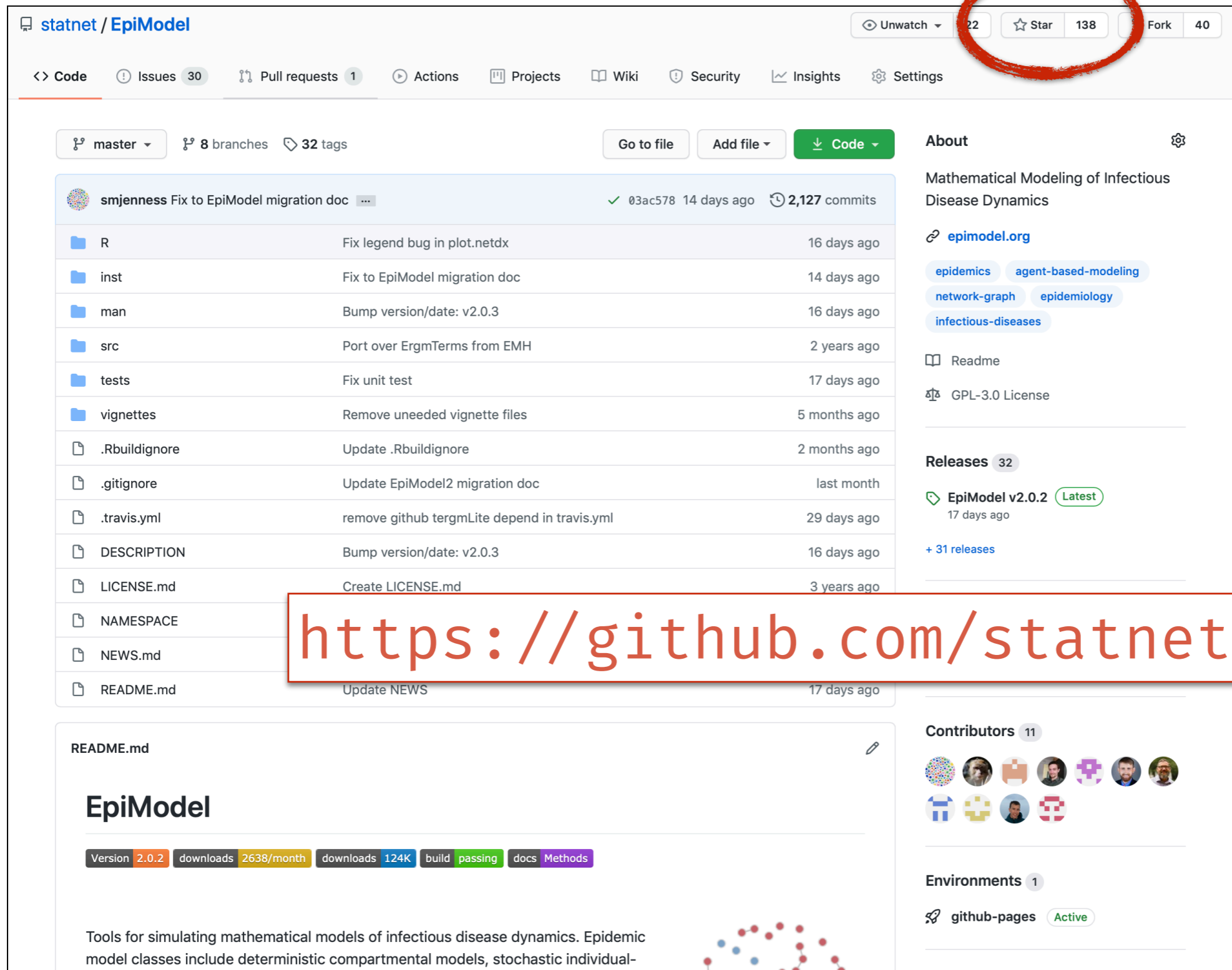
Software Manual

The [EpiModel Software Manual](#) provides a list of all the main functions within the package, with syntax and examples. This documentation is also available within the package by consulting the help files.

<https://epimodel.org/>

- Tutorial, resources, links to Github repositories
- NME 2020 Resources:
 - We will keep Slack workspace open
 - Video recordings available for at least 90 days
 - All other NME materials available indefinitely (updated yearly)

Github Repository



statnet / EpiModel

Unwatch 22 Star 138 Fork 40

<> Code Issues 30 Pull requests 1 Actions Projects Wiki Security Insights Settings

master 8 branches 32 tags

Go to file Add file Code

smjenness Fix to EpiModel migration doc 03ac578 14 days ago 2,127 commits

R	Fix legend bug in plot.netdx	16 days ago
inst	Fix to EpiModel migration doc	14 days ago
man	Bump version/date: v2.0.3	16 days ago
src	Port over ErgmTerms from EMH	2 years ago
tests	Fix unit test	17 days ago
vignettes	Remove unneeded vignette files	5 months ago
.Rbuildignore	Update .Rbuildignore	2 months ago
.gitignore	Update EpiModel2 migration doc	last month
.travis.yml	remove github tergmLite depend in travis.yml	29 days ago
DESCRIPTION	Bump version/date: v2.0.3	16 days ago
LICENSE.md	Create LICENSE.md	3 years ago
NAMESPACE		
NEWS.md		
README.md	Update NEWS	17 days ago

About
Mathematical Modeling of Infectious Disease Dynamics
epimodel.org
epidemics agent-based-modeling
network-graph epidemiology
infectious-diseases
Readme
GPL-3.0 License

Releases 32
EpiModel v2.0.2 Latest
17 days ago
+ 31 releases

Contributors 11

Environments 1
github-pages Active

EpiModel

Version 2.0.2 downloads 2638/month downloads 124K build passing docs Methods

Tools for simulating mathematical models of infectious disease dynamics. Epidemic model classes include deterministic compartmental models, stochastic individual-

<https://github.com/statnet/EpiModel>

- **Github Issues**
 - File an issue to ask targeted questions and/or file a bug report
- **Github wiki**
 - Up to date listing of current literature using EpiModel
- **Github NEWS/Releases**
 - Listing of how EpiModel has changed over time
 - New features added with every release

EpiModel Gallery

EpiModel / EpiModel-Gallery Unwatch 10 Star 34 Fork 14

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master 3 branches 1 tag Go to file Add file Code

smjenness Use renv 7439b2f 16 days ago 236 commits

2018-08-AddingAnExposedState	Removal of default functions/testing workflow.	last month
2018-08-ObservedNetworkData	Removal of default functions/testing workflow.	last month
2018-08-SlwithVitalDynamics	Removal of default functions/testing workflow.	last month
2018-08-TestAndTreatIntervention	Removal of default functions/testing workflow.	last month
2018-09-CompetingStrains	Removal of default functions/testing workflow.	last month
2018-09-SocialDiffusion	Removal of default functions/testing workflow.	last month
2018-10-SEIRwithAONVax	Removal of default functions/testing workflow.	last month
2018-11-Syphilis	Removal of default functions/testing workflow.	last month
2018-12-SEIRSwthLeakyVax	Removal of default functions/testing workflow.	last month
2019-03-HIV	Removal of default functions/testing workflow.	last month
.Rbuildignore	Use renv	16 days ago

About Gallery of Network-Based Epidemic Model Templates for EpiModel
epimodel.org
Readme
MIT License

Releases 1
Gallery for EpiModel v1.x **Latest**
on Jul 10

Packages
No packages published
[Publish your first package](#)

DESCRIPTION	Add DESCRIPTION file for Travis build	2 years ago
LICENSE	Initial commit	2 years ago
README.md	Update README.md	9 months ago
renv.lock	Use renv	16 days ago
test.sh	Count directories in test.sh	2 years ago

README.md

EpiModel-Gallery

Languages
R 99.6% Shell 0.4%

We are here to help!

- A central mission of the EpiModel/Statnet platforms is to assist our users
 - Ask for help in a semi-public forum so others can learn from your questions
- Technical questions are facilitated by an MRE
 - Minimally reproducible example = something that is minimal enough to reproduce your error/question, but no more
- We request that you cite EpiModel if you use it
 - Jenness SM, Goodreau SM and Morris M. EpiModel: An R Package for Mathematical Modeling of Infectious Disease over Networks. *Journal of Statistical Software*. 2018; 84(8): 1-47.
 - Send us an email to let us know, so we can add it to our bibliography
- Consider using an open-source, open-development model yourself

THANK YOU!

- Final thoughts from your instructors
- Remaining time is available for questions, project consultations, small group discussions...