

Thadryan Sweeney

Technologist, Instructor

I am a Computational Biologist and Scientific Software Developer interested in applying statistical and computational techniques to the study of systems large and small.

Research Positions

- 2020 **Research Technologist**, *Mass General/Harvard Medical School*, Boston, MA.
- 2018 **Bioinformatics & Data Science Contractor**, *bluebird bio*, Cambridge, MA.

Education

- 2011 **Associate of Arts**, *Greenfield Community College*, Greenfield, MA.
- 2013 **Bachelor of Science**, *American International College*, Springfield, MA.
- 2019 **Master of Science**, *Northeastern University*, Boston, MA.

Teaching & Assistantships

Instructor

- 2020 **Bioinformatics Methods I (spring)**, *Northeastern University*.
- 2020 **Bioinformatics Methods I (fall)**, *Northeastern University*.
- 2021 **Bioinformatics Methods I (spring)**, *Northeastern University*.

Teaching Assistant

- 2018 **Bioinformatics programming**, *Northeastern University College of Science*.
- 2018 **Collecting, storing, and retrieving data**, *Northeastern University College of Computer & Information Science*.
- 2018 **Introduction to data science and machine learning (spring)**, *Northeastern University College of Computer & Information Science*.

Published Software

- 2020 **An interactive Bayesian Ttool for SARS-CoV2-Antibody test interpretation**, *Manuscript supplement*, <https://covid.omics.kitchen/>.
- 2021 **ContrApption: interactive JavaScript widgets for visualizing RNA-Seq like data from a single function call in R**, <https://github.com/omics-kitchen/ContrApption>.

Publications

Published

- 2021 **Evaluation of serological lateral flow assays for severe acute respiratory syndrome coronavirus-2**, *Supplement*: <https://covid.omics.kitchen/>.

In preparation

- TBD miRNAs in canine mitral value disorders.
- TBD An atlas of miRNAs by tissue type.
- TBD ContrApption: interactive visualization of RNA-Seq style datasets from a single function call.
- TBD tRNA-derived species pre and post cardiac bypass surgery.
- TBD Molecular profiling of heart failure subtypes.

Extra-professional work

- 2021 **National survivor financial security policy map and scorecard**, *The #1 obstacle to a survivor's long-term safety is financial insecurity. This means that we cannot disrupt the cycle of intimate partner violence in the U.S. until we move beyond the current focus on crisis response and prioritize policies that support financial security and long-term safety for survivors and their families. That is, we must prioritize policies that support survivor wealth.* <https://mapandscorecard.freefrom.org/>.

Pre-academic work

Antibody Technician - New England Peptide

(Now 'Vivitide')

Sept. '15 - Sept. '17

- . Ran day-to-day operations of antibody production lab as sole technician.
- . Self-taught Python programming to automate bioinformatics tasks, saving weeks of effort and dozens of errors.
- . Studied and practiced antigen design under an industry leader.

Chemical Operator, Vinegar Plant - Pilgrim Foods

Mar. '15 - Sept. '15

- . Inoculated, monitored, and maintained live cultures of Acetobacter for fermentation of ethanol to acetic acid.
- . Redefined instrument calibration procedure by observing logarithmic trends in data previously modeled as linear.
- . Formulated batches of mash to alcohol, acidity, stock, and water specifications.

Asst. Manager, Peer Counselor - The Bridge of Central Mass

(Now 'Open Sky Community Services')

Nov. '13 - Mar. '15

- . Counseled individuals aged 18-25 in their recovery from mental illness and trauma.
- . Provided quality assurance for medication administration and financial tracking.
- . Supervised nine employees during shifts and on call from home for crisis management.

Firefighter/EMT - Orange Fire Rescue EMS

Jun. '08 - Sept. '14

- . Engaged in fire/rescue activities, structural and wildland firefighting, search operations, and trauma management.
- . Responded to medical emergencies, performed CPR/Basic life support, and administered medication.
- . Participated in search and rescue operations and trainings, including ice rescue training and boat operations.

Media

2020 COVID-19 LFA Research. <https://www.wcvb.com/article/boston-researchers-assess-performance-of-covid-19-antibody-tests/33625088>

📞 +978 696 6946 • ✉ thadryan@protonmail.com
🌐 sweeney-th.github.io • in thadryan-sweeney-10b938a
🐦 ThadryanJS • 🌐 sweeney-th

```
## .
## 0 1
## 18 14

##
## Call: glm(formula = vs ~ mpg + carb + disp, family = "binomial", data = mtcars)
##
## Coefficients:
## (Intercept)      mpg      carb      disp
## 32.2570      -0.6651     -2.4018     -0.0612
##
## Degrees of Freedom: 31 Total (i.e. Null); 28 Residual
## Null Deviance:      43.86
## Residual Deviance: 13.35      AIC: 21.35

##
## Call:
## glm(formula = vs ~ mpg + carb + disp, family = "binomial", data = mtcars)
##
## Deviance Residuals:
##      Min       1Q   Median       3Q      Max
## -2.39018  -0.20005  -0.00161   0.22948   1.34164
##
## Coefficients:
##              Estimate Std. Error z value Pr(>|z|)
## (Intercept) 32.25699   22.42103   1.439   0.1502
## mpg         -0.66514    0.55900  -1.190   0.2341
## carb        -2.40176    1.46640  -1.638   0.1014
## disp        -0.06120    0.03676  -1.665   0.0959 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##      Null deviance: 43.860  on 31  degrees of freedom
## Residual deviance: 13.345  on 28  degrees of freedom
## AIC: 21.345
##
## Number of Fisher Scoring iterations: 8

## (Intercept)      mpg      carb      disp
## 32.25698721 -0.66513593 -2.40176337 -0.06120218
```