GREG CHISM

Computational and Data Science Educator (Ph.D.)

View this CV online with links at https://gregtchism.netlify.app/cv/gchism_cv.pdf/

EDUCATION

2022 | 2017

Ph.D., Entomology and Insect Science (minor EEB)

Tucson, AZ — University of Arizona

- Advisor: Dr. Anna Dornhaus
- Interdisciplinary research into how ant nest shapes affects how they behave
- Considered the implications towards animal behavior and human architecture fields

2016 | 2014

B.S. Zoology

Santa Barbara, CA — University of California Santa Barbara

- Advisors: Drs. Armand Kuris, Kevin Laugherty, Jonathan Pruitt
- Investigation into the food web of sandy beach arthropods.
- Probing animal personality of sandy beach jumping spiders and social spiders
- Graduated distinction within major (EEMB)

2014 | 2012

A.A. Biology

Redding, CA — Shasta Community College

CERTIFICATIONS

2022 | 2022

Certified Data Carpentries Instructor

Tucson, AZ — University of Arizona

- Trained to provide high quality data science workshops that are inclusive and broad reaching

RELATED WORK EXPERIENCE

Current | 2022

Computational and Data Science Educator

Tucson, AZ — University of Arizona

- Developing personalized open science and statistics curriculum in the R programming language
- Motivating students to pursue careers in data science
- Developing best open science practices in related research disciplines

CONTACT

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- Gchism94
- gregchism.netlify.app
- linkedIn

RELEVANT SKILLS

Programming

- R/RStudio
- R Markdown & Quarto
- Python
- Shiny
- Bash
- HTML & CSS
- Netlogo/Agent-Based Models

Data Science

- Data Visualization
- Biostatistics
- Open Science

*Made with the R package **pagedown**.*

The source code is available on github.com/Gchism94/cv.

Last updated on 2022-08-22.

2022 | 2021

CALS Data Science Ambassador

Tucson, AZ — University of Arizona

- Provided data science consultations, resources, and referrals
- Attended and assisted in R weekly workshops led by Dr. Jeffrey Oliver

2022 | 2021

Honors College Graduate Mentor

Tucson, AZ — University of Arizona

- Mentored and assisted nine undergraduate and graduate students towards developing competitive scholarship applications

2021 | 2018

Graduate College Fellowship Application Mentor

Tucson, AZ — University of Arizona

- Edited and mentored over 70 applicants for the NSF GRFP and other graduate fellowships
- Three women in STEM applicants were awarded NSF GRFs
- Contributed Graduate Student Spotlight article as an NSF GRF recipient

TEACHING AND MENTORSHIP

2022 | 2022

Data Science Fellows

Tucson, AZ — University of Arizona

- Educated scientists at the Postdoctoral level in a dynamic environment that developed, exchanged, and created data science expertise towards solving cutting edge research problems in health and biomedical sciences.

2022 | 2022

Roots for Resilience (R4R)

Tucson, AZ — University of Arizona

- Educated senior grad students from a variety of academic domains to use data science techniques to encourage discoveries within their domains.

2022 | 2022

Research Compendium using GitHub and RStudio

Tucson, AZ — University of Arizona

- Created and taught a workshop series on reproducuble research compendium using GitHub and RStudio
- Created a companion Quarto book that served as workshop materials for asynchronous learners.

2022 | 2022

Exploratory Data Analysis in R Workshop Series

Tucson, AZ — University of Arizona

- Created and taught a workshop series on exploratory data analysis using the dlookr R package.
- Created a companion Quarto book that served as workshop materials for asynchronous learners.

2022 | 2022

KEYS Program Educator

Tucson, AZ — University of Arizona

- Created and implemented an interactive Open Science and Machine Learning Curriculum for Title I high school seniors
- Taught introduction to R/RStudio utilyzing RStudio Cloud

2020 | 2018

Undergraduate Research Mentor

Tucson, AZ — University of Arizona

- Dornhaus lab: nine students mentored in producing publication quality data
- Two students are coauthors on publications

2019 | 2018

Insect Discovery Teaching Assistant

Tucson, AZ — University of Arizona

- Taught insect science K-8 title I students from the Southwest through four on-campus workshops
- Gave on-site interactive demonstrations on insect science at the Flandrau Planetarium

2019 | 2019

KEYS High school student Mentor

Tucson, AZ — University of Arizona

- Mentored an advanced high school student in data etiquette and hypothesis testing

2018 | 2018

SARSEF High school Student Mentor

Tucson, AZ — University of Arizona

- Mentored three high school students in data etiquette and hypothesis testing

PROFESSIONAL DEVELOPMENT

2022 | 2022

Foundational Open Science Skills (FOSS)

Tucson, AZ — University of Arizona

- Participated. CyVerse's 10 week virtual workshop that taught the principles, practices, and how-tos for doing collaborative open science using cutting-edge, open source cyberinfrastructure, in a collaborative, hands-on setting.

2022 | 2022

Developing the Data Science Classroom

Washington D.C. — RStudio::conf(conf)

- Participated. Equip educators with concrete information on content, workflows, and infrastructure for painlessly introducing modern computation with R and RStudio within a data science curriculum.

2022 | 2022

Basic & Advanced Container Camp

Tucson, AZ — University of Arizona

- Participated. CyVerse's Basics and Advanced workshops on container technologies are game-changers, enabling you to easily share, scale, and reuse tools and workflows for all types of computational analyses.

2018 | 2018

Data-driven Ecological Synthesis 2018

Montreal, Canada — Université de Montréal

- Participated. Applying the R programming language to answer a diversity of biological questions

PUBLISHED RESEARCH COMPENDIUM

2022 | 2022

AntColonyPerformance

GitHub repository

- Zenodo published pre-release for a research compendium to reproduce in preparation research

2022 | 2022

NestArchOrg

GitHub repository

- Zenodo published research compendium to reproduce results from DOI: https://doi.org/10.1101/2022.06.30.498314

2022 | 2022

HumidityProject

GitHub repository

- Zenodo published research compendium to reproduce results from DOI: https://doi.org/10.1101/2022.06.30.497551

PUBLICATIONS

2022 | 2022

Nest shape influences colony organization in ants: spatial distribution and connectedness of colony members differs from that predicted by random movement and is affected by nest space

bioRxiv Preprint

- Coauthored with Nichols, W., and Dornhaus A.

2022 | 2022

Temnothorax rugatulus ants do not change their nest walls in response to environmental humidity

bioRxiv Preprint

- Coauthored with Faron W., and Dornhaus A.

2021 | 2021

A hymenopteran odorant alerts flies to bury eggs

bioRxiv Preprint

- Coauthored with Davis, S. M., Maurer, M. M., Trejo, J. E., Garcia, R. J., & Schlenke, T. A.

2020 | 2020

ABCTracker: an easy-to-use, cloud-based application for tracking multiple objects

arXiv Preprint

- Coauthored with Rice, L., Tate, S., Farynyk, D., Sun, J., Charbonneau, D., ... & Shin, M. C.

2017 | 2017

Intraindividual behavioral variability predicts foraging outcome in a beach-dwelling jumping spider

Scientific reports

- Coauthored with Lichenstein, J.L.L, Pruitt J.N.

PUBLISHED DATASETS

2022 | 2022

Zenodo data repository for DOI: https://doi.org/10.1101/2022.06.30.498314

Zenodo dataset

- Nest shape influences colony organization in ants: spatial distribution and connectedness of colony members differs from that predicted by random movement and is affected by nest space (1.0.0) [Data set]. Zenodo. https://doi.org/10.5281/zenodo.6784395

2022 | 2022

Zenodo data repository for DOI: https://doi.org/10.1101/2022.06.30.498314

Zenodo dataset

- Temnothorax rugatulus ants do not change their nest walls in response to environmental humidity (1.0.0) [Data set]. Zenodo. https://doi.org/10.5281/zenodo.6780270

OUTREACH AND SERVICE

2022 | 2022

RStudio Connect

Tucson, AZ

- Build an interactive dashboard displaying user metrics, facilitated monthly project highlights, and consulted on how to collaborate and best utilize the UArizona RStudio Connect platform.

2022 | 2022

ResBaz Arizona 2022

Tucson, AZ

- Co-chair of ResBaz AZ 2022 organizational committee.

2022 | 2022

Insect Discovery Website

Tucson, AZ

- Designed content for the Insect Discovery website, hosted by the UArizona Extension Program

INVITED TALKS

2021 | 2021

How nest shapes can influence colony level organization

Small intercontinental lab meet-up on colony organization and nest architecture in social insects

• Invited talk

2019 | 2019

Nest architecture may influence ants the same was buildings influence humans

Advances in Complex Systems: From Ecology to Economics - Lake Como School of Adv. Studies

• Invited talk

2019 | 2019

The influence of nest architecture on colony level organization in ants

UArizona SIAM Seminar series

• Invited talk

SELECTED AWARDS

2021 | 2021

Carruth Award for Graduate Student Excellence

• $500

2020 | 2020

GIDP - EIS Program Education Award

• $250

2019 | 2019

NSF Graduate Research Fellowship, Award Accepted

• $300,000