GREG CHISM

Computational and Data Science Educator (Ph.D.)

🎓 EDUCATION

2022
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2017

Ph.D. Entomology and Insect Science (minor in 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
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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
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2012

A.A. Biology

Redding, CA 📍 Shasta Community College

✷ CERTIFICATIONS

2022
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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
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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

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

CONTACT

- ✉ gchism@arizona.edu
- ⓖ Gchism94
- 🔗 gregtchism.netlify.app
- in linkedIn

RELEVANT SKILLS

Programming/Software

R/RStudio
R Markdown/Quarto
Shiny
Python
Bash
Docker
CyVerse
Jetstream2
OpenRefine
HTML/CSS/SCSS
Netlogo/Agent-Based Models

Data Science

Data Visualization
Biostatistics
Open Science
Computational Thinking
Containers
Data Ethics
Image/Video Analysis
Website Design

Made with the R package
pagedown.

Source code.

Last updated on 2022-08-24.

2022
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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
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2021

Honors College Graduate Mentor

Tucson, AZ

 University of Arizona

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

2021
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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
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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
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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
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2022

Research Compendium Using GitHub and RStudio

Tucson, AZ

 University of Arizona

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

2022
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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.

KEYS Program Educator
2022
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2022
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

Undergraduate Research Mentor
2020
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2018
Tucson, AZ

📍 University of Arizona

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

Insect Discovery Teaching Assistant
2019
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2018
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

KEYS High School Student Mentor
2019
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2019
Tucson, AZ

📍 University of Arizona

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

SARSEF High School Student Mentor
2018
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2018
Tucson, AZ

📍 University of Arizona

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

👔 PROFESSIONAL DEVELOPMENT

Foundational Open Science Skills (FOSS)
2022
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2022
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.

Developing the Data Science Classroom
2022
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2022
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 TEACHING CURRICULUM

2022 | 2022

Data7 EDA in R Workshop Series

GitHub repository

· Companion materials and Quarto Book for my Exploratory Data Analysis in R workshop series

2022 | 2022

Data7 Reproducible Research with GitHub and RStudio Workshop Series

GitHub repository

· Companion materials and Quarto Book for my Reproducible Research with GitHub and RStudio Workshop Series

2022 | 2022

Data7 KEYS Internship Open Science Materials

GitHub repository

· Compantion Quarto presentations and R Markdown for my KEYS internship open science curriculum

✦ 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

PUBLISHED RESEARCH

2022
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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
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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
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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
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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
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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
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2022

Data repository for DOI: https://doi.org/10.1101/2022.06.30.498314

Zenodo

· 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
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2022

Data repository for DOI: https://doi.org/10.1101/2022.06.30.498314

Zenodo

· 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
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2022
RStudio Connect Landing Page
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.
· Expected completion: October, 2022

2022
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2022
ResBaz Arizona 2022
Tucson, AZ

· Co-chair of ResBaz AZ 2022 organizational committee.

2022
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2022
Insect Discovery Website
Tucson, AZ

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

💻 INVITED TALKS

2021
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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
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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
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2021
Carruth Award for Graduate Student Excellence
$500

2020
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2020
GIDP – EIS Program Education Award
$250

2019
|
2019
NSF Graduate Research Fellowship, Award Accepted
$300,000

◫ REFERENCES

● **Anna Dornhaus (Ph.D.)**

dornhaus@arizona.edu

· Professor
· Ecology and Evolutionary Biology
· The University of Arizona

● **Jeffrey Oliver (Ph.D.)**

joliver@arizona.edu

· Data Science Specialist
· University Libraries
· The University of Arizona

● **Maliaca Oxnam (M.A.)**

maliaca@arizona.edu

· Deputy Director
· Data Science Institute
· The University of Arizona

● **Nirav Merchant (Ph.D.)**

nirav@arizona.edu

· Director/Co-PI
· Data Science Institute/CyVerse
· The University of Arizona