

GREG CHISM

Assistant Professor of Practice
School of Information
University of Arizona
Tucson, AZ

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

EDUCATION

- 2022 | 2017
- **Ph.D. Entomology and Insect Science (minor in EEB)**
University of Arizona  Tucson, AZ
 - Advisor: Dr. Anna Dornhaus
 - Interdisciplinary research into how ant nest shapes affects how colonies behave
 - Considered the implications towards animal behavior and human architecture fields
- 2016 | 2014
- **B.S. Zoology**
University of California Santa Barbara  Santa Barbara, CA
 - 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**
Shasta Community College  Redding, CA

CERTIFICATIONS

- 2023 | 2023
- **Carpentries Instructor Trainer**
The Carpentries
 - Trained in best practices from learning theory to promote a safe and inclusive learning environment
 - Hosted Carpentries Instructor teaching demos
- 2022 | 2022
- **Carpentries Instructor**
The Carpentries
 - Trained to provide high quality data science workshops that are inclusive and broad reaching

CONTACT

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 [greg-chism](#)

RELEVANT SKILLS

Programming/Software

R/RStudio
R Markdown/Quarto
Git/GitHub
Shiny
Python
Docker
Unix Shell
CyVerse
HTML/CSS
SQL/MySQL
NetLogo/Agent-Based Models

Data Science

Data Visualization
Data Mining
Biostatistics
Open Science
Computational Thinking
Containers
Biological Modeling
Website Design



RELATED WORK EXPERIENCE

Current
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2023

- **Assistant Professor of Practice**
University of Arizona 📍 Tucson, AZ
 - Designed and delivered innovative data visualization and data mining courses
 - Developed and implemented a new MS Capstone course

2023
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2022

- **Computational and Data Science Educator**
University of Arizona 📍 Tucson, AZ
 - Designed and delivered diverse modality learning materials in R and Python.
 - Developed open science and statistics curriculum.
 - Fostered inclusive, engaging learning environment for diverse students.
 - Mentored students in data science career pursuits.
 - Led the steering committee for the ResBaz AZ 2023 festival.

2022
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2021

- **CALS Data Science Ambassador**
University of Arizona 📍 Tucson, AZ
 - Conducted data science consultations and provided tailored resources.
 - Assisted in weekly R workshop delivery.
 - Mentored workshop attendees in R programming applications.

2022
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2021

- **Honors College Graduate Mentor**
University of Arizona 📍 Tucson, AZ
 - Guided nine diverse students in developing competitive scholarship applications.

2021
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2018

- **Graduate College Fellowship Application Mentor**
University of Arizona 📍 Tucson, AZ
 - Mentored 70+ fellowship applicants, primarily for the NSF Graduate Research Program.
 - Guided three women in STEM to secure NSF Graduate Research Fellowships.
 - Authored Graduate Student Spotlight article as an NSF GRF recipient.



TEACHING AND MENTORSHIP

Current
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2023

- **Capstone project mentor**
University of Arizona 📍 Tucson, AZ
 - Mentored 2 undergraduate capstone group projects
 - Mentoring 2 MS capstone projects (Spring 2024)

Current 2023	<ul style="list-style-type: none"> MS Student Group Projects University of Arizona 📍 Tucson, AZ <p>• Mentored 13 novel student group projects in INFO 523 and INFO 526 • Two projects ongoing past course completion</p>
2023 2022	<ul style="list-style-type: none"> Data Science Fellows University of Arizona 📍 Tucson, AZ <p>• Co-led a program cultivating open science and data science expertise among diverse health science postdocs and graduate students.</p>
2023 2022	<ul style="list-style-type: none"> Roots for Resilience (R4R) University of Arizona 📍 Tucson, AZ <p>• Co-led a program teaching diverse senior graduate students across multiple disciplines to leverage data science for domain-specific discoveries.</p>
2023 2022	<ul style="list-style-type: none"> KEYS Program Educator University of Arizona 📍 Tucson, AZ <p>• Devised and executed an interactive curriculum for Title I high school seniors, covering open science, statistics, and machine learning principles, and introduced R/RStudio through RStudio Cloud.</p>
2022	<ul style="list-style-type: none"> Research Compendium Using GitHub and RStudio University of Arizona 📍 Tucson, AZ <p>• Developed and instructed a workshop series on reproducible research using GitHub and RStudio, complemented by a Quarto book for asynchronous learners.</p>
2022	<ul style="list-style-type: none"> Exploratory Data Analysis in R University of Arizona 📍 Tucson, AZ <p>• Devised and delivered a workshop series on exploratory data analysis leveraging the dlookr R package, with an accompanying Quarto book for asynchronous learners.</p>
2020 2018	<ul style="list-style-type: none"> Undergraduate Research Mentor University of Arizona 📍 Tucson, AZ <p>• Guided nine students towards producing publication-quality data, resulting in two of them becoming co-authors on academic manuscripts.</p>
2019 2018	<ul style="list-style-type: none"> Insect Discovery Teaching Assistant University of Arizona 📍 Tucson, AZ <p>• Delivered engaging insect science workshops to K-12 Title I students from the Southwest, enhancing their understanding of the field through hands-on demonstrations at the Flandrau Planetarium.</p>

- 2019 ● **KEYS High School Student Mentor**
University of Arizona 📍 Tucson, AZ
• Mentored an advanced Title I high school student in data etiquette and hypothesis testing
- 2018 ● **SARSEF High School Student Mentor**
University of Arizona 📍 Tucson, AZ
• Mentored three Title I high school students in data etiquette and hypothesis testing
-  **OUTREACH AND SERVICE**
- 2023 ● **iSchool Awards Committee**
University of Arizona
• Served as a member, assisting in faculty award nomination and applications
- 2023 ● **ResBaz Arizona 2023**
University of Arizona
• Chair of the steering committee
• Expanded the festival to ASU and NAU
• ~100 attendees each day
- 2022 ● **Industry Careers in Data Science Speaker Series**
University of Arizona
• Developed and hosted a speaker series that focused on academics that transitioned to industry careers in data science
• ~20-40 attendees each session spanning diverse disciplines, career stages, and cultures
- 2022 ● **RStudio Connect Landing Page**
University of Arizona
• Built a launch page and interactive user metrics dashboard with monthly project highlights
• Final version will be HTML and Javascript landing site
- 2022 ● **ResBaz Arizona 2022**
University of Arizona
• Co-chair of the steering committee
- 2022 ● **Insect Discovery Website**
University of Arizona
• Designed content for the Insect Discovery website, hosted by the UArizona Extension Program



PROFESSIONAL DEVELOPMENT

- 2022 ● **Foundational Open Science Skills (FOSS)**
University of Arizona 📍 Tucson, AZ
• Completed CyVerse's collaborative workshop series on Foundational Open Science Skills, developing proficiency in using open source cyberinfrastructure for reproducible research and scientific collaboration.
- 2022 ● **Developing the Data Science Classroom**
RStudio::conf(2022)
• Attended a workshop focused on using R and RStudio for teaching in a data science college classroom setting.
- 2022 ● **Basic & Advanced Container Camp**
University of Arizona 📍 Tucson, AZ
• Completed CyVerse's Basics and Advanced workshops on container technologies, emphasizing sharing, scaling, and reusing tools for computational analyses.
- 2018 ● **Data-driven Ecological Synthesis**
Université de Montréal 📍 Montreal, Canada
• Attended a week-long course focused on applying the R programming language to a diverse range of biological questions, enhancing expertise in data analysis and interpretation.
- 2017 ● **Intro to Modeling in Biology (ECOL 519)**
University of Arizona 📍 Tucson, AZ
• Exploring the role of biological modeling with hands-on examples in Mathematica



PUBLISHED TEACHING CURRICULUM

- 2022 ● **Data7 EDA in R Workshop Series**
Zenodo
• Companion materials and Quarto Book for [Exploratory Data Analysis in R](#)
- 2022 ● **Data7 Reproducible Research with GitHub and RStudio Workshop Series**
Zenodo
• Companion materials and Quarto Book for [Reproducible Research with GitHub and RStudio](#)
- 2022 ● **Data7 EDA in Python**
Zenodo
• Quarto Book learning materials for [Exploratory Data Analysis in Python](#)

- 2022 ● [Data7 EDA in SQL](#)
Zenodo
• Quarto Page learning materials for [Exploratory Data Analysis in SQL](#)
- 2022 ● [Data7 EDA in Unix Shell](#)
Zenodo
• Quarto Page learning materials for [Exploratory Data Analysis in Unix Shell](#)
- 2022 ● [Data7 KEYS Internship Open Science Materials](#)
Zenodo
• Companion Quarto presentations and R Markdown for my KEYS internship open science and Machine Learning curriculum
• [Machine Learning](#)

↳ PUBLISHED RESEARCH COMPENDIUM

- 2022 ● [AntColonyPerformance](#)
Zenodo
• GitHub repository for a research compendium to reproduce in preparation research
- 2022 ● [NestArchOrg](#)
Zenodo
• GitHub repository for a research compendium to reproduce results from DOI: <https://doi.org/10.1101/2022.06.30.498314>
- 2022 ● [HumidityProject](#)
Zenodo
• GitHub repository for a research compendium to reproduce results from DOI: <https://doi.org/10.1101/2022.06.30.497551>

☰ PUBLISHED RESEARCH

- 2023 ● **Developing open science and statistics curriculum in the R and Python programming languages**
Submitted to PLOS Computational Biology
• Coauthored with Swetnam, T., et al.
- 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
 - **Temnothorax rugatulus ants do not change their nest walls in response to environmental humidity**
bioRxiv Preprint
 - Coauthored with Faron W., and Dornhaus A.
- 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
 - **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
 - **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
 - **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>
 - **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>



INVITED TALKS

- 2022
 - **Integrating Data Science into your Research: An Introduction to the Data Science Institute**
UArizona Computational Social Science Annual Gathering
- 2021
 - **How nest shapes can influence colony level organization**
Small intercontinental lab meet-up on colony organization and nest architecture in social insects

- 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

- 2019
- **The influence of nest architecture on colony level organization in ants**
UArizona SIAM Seminar series

SELECTED AWARDS

- 2021
- **Carruth Award for Graduate Student Excellence**

\$500

- 2020
- **GIDP - EIS Program Education Award**

\$250

- 2019
- **NSF Graduate Research Fellowship, Award Accepted**

\$150,000