THE UNIVERSITY OF ARIZONA

RESEARCH, INNOVATION & IMPACT
Data Science Institute

The Data Drip
A Digest of Data Science News at UArizona

APRIL 2023

DATA SCIENCE INSTITUTE

Join us at the April 10-21 2023 DataFest!

2023 DataFest: April 10-21

New to data science? Not sure if you "do" data science? Long-time data and computer scientist? The inaugural DataFest is for you! Join us April 10-21 for a series of cross-campus, in-person and online events at UArizona that celebrate and explore data science, tools, and solutions for beginners and experts. Take a look at the lineup for each event and register. You can stop by and join the events when it's convenient for you. We look forward to seeing you!

April 10-13: Software Carpentry

Software Carpentry aims to help researchers get their work done in less time and with less pain by teaching them basic research computing skills. This hands-on workshop will cover basic concepts and tools, including program design, version control, data management, and task automation. Participants will be encouraged to help one another and to apply what they have learned to their own research problems. Register now!

April 17-19: ResBaz Arizona Annual Festival

ResBaz Arizona (ResBaz AZ) is a free, multi-day intensive festival where researchers come together to up-skill in "next generation digital research tools and skills." In the spirit of a marketplace or bazaar, ResBaz AZ is a highly participatory event where researchers from many different disciplines can learn, share knowledge and skills, and have fun! Join researchers, research technicians, and PhD and research master's students at ALL levels from ALL disciplines. Learning together - Northern Arizona University, University of Arizona, and Arizona State University. Register.

April 20: Explore: Opportunities in Data

This career and networking fair is designed for undergraduate and graduate students interested in job opportunities and professional development. Gould Simpson Bldg., 2nd floor atrium. 2pm to 5pm. More details forthcoming.

April 20: Women in Data Science (WiDS) Conference

Denice Ross, a UArizona alumna and chief data scientist for the White House Office of Science and Technology Policy, will be a keynote speaker. WiDS Tucson aims to inspire and

educate data scientists, regardless of gender, and support women in the field. The free conference events provide an opportunity to hear about outstanding women doing outstanding work, the latest data science-related research and applications, and connect with others in the field. Register and learn more about the 2023 WiDS Conference.

April 21: Research Data Challenge Conference and Awards Luncheon

Students who submitted entries to the inaugural Research Data Challenge are invited to present their research and attend a luncheon, where the winners of the competition will be announced and certificates given to all of those who successfully participated.

MUSINGS AND OPINIONS

The data science community is vibrant and full of topics of conversation. **Email the Data Science Institute** your thoughts and opinions on data science-related topics that you would like to share with the UArizona data science community.

In this issue, read what **Tyson Swetnam** with CyVerse has to say about Artificial Intelligence in his blog posting, *Meet your new personal assistant, Artificial Intelligence*. " 'Have you tried ChatGPT?' has quickly become the most frequently mentioned topic of conversation at faculty meetings and informal gatherings during the early months of 2023. ChatGPT, now just five months old has already amassed over 100 million users...."

Read the full post.

The views and opinions expressed in The Data Drip are those of the authors or content creators and do not necessarily reflect the official policy or position of the UArizona Data Science Institute.

DSI NEWS

INDUSTRY CAREERS IN DATA SCIENCE

Industry speaker series semester wrap up - Mary Rose Sena

Greg Chism hosted the final Spring semester Industry Careers in Data Science speaker series on April 5. Mary Rose Sena presented *A Day in the Life of a Data Scientist at Sandia National Labs* to a captivated audience. In addition to other informative topics, she addressed data science core skills and professional traits that are valuable for being marketable at Sandia National Laboratories. As a bonus for the students, they now have a direct line to potential future internships, as the director of Sena's unit at Sandia was also in attendance. Mary Rose's experience demonstrates how anyone with a STEM focus has the opportunity to make the country safe at Sandia National Laboratories.

Data Science Institute 1:1 Consultations with the Experts
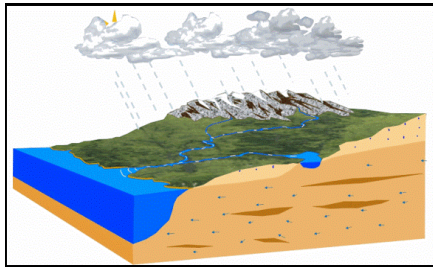
Schedule for 1:1 Data Science consultations

Experts in R/RStudio, Python, data analysis, data visualization, machine learning, and more in the R and Python programming languages, **Greg Chism**, **Carlos Lizárraga**, and **Heidi Steiner** with the Data Science Institute are available for **one-on-one data science consultations**. **Schedule an appointment** with them to get data science answers to your questions. They have already helped many others with issues including topics spanning the life, physical, health, and social sciences.

The UArizona Phoenix Biomedical campus data science workshop series discuss relevant open science and data science topics with a slight focus towards the Health Sciences audience. All are welcome! Luisa Rojas, a CTS graduate student and Spring 2022 Data Science Fellow, initiated this series in Fall 2022.   On March 24, 2023 Dr. Nicole Jimenez, a Fall 2022 Data Science Fellow, presented "From Clinic to Analysis: Why Setting Up and Understanding Your Metadata Matters."   Spring 2023 Data Science Fellow, Ajay Perumbeti, joined the team to continue to promote the Phoenix Biomedical Campus connecting data

science enthusiasts in the Phoenix area. The series are via Zoom and in-person at the PBC Library.

- April 21, 12:00 pm - 1:30 pm, Building a data management for your lab project (Data governance)
- May 12, 11:30 pm - 1:00 pm, Dataset documentation and version control tools (GitHub)
- May 26, 11:30 pm - 1:00 pm, How to implement data science in the wet lab (Journal club)

Roots for Resilience – accomplishes its goals, a Fellow's perspective

Goals of the Roots for Resilience (R4R) program include preparing students on how to conduct research in a more efficient way using open science, computational infrastructures, and concepts and improving communication with other scientists based on collective experiences. Yuan-Heng Wang, a graduate student in the Spring 2022 R4R cohort, credits the R4R program with giving him the tools he needed to be successful in participating in the December 2022 American Geophysical Union conference. . **Read more** about his experience and how he applied what he learned from the Roots for Resilience program

2023 Year of Open Science - promoting activities

The Data Science Institute is collecting campus-wide 2023 Year of Open Science activities and posting them on the **DSI Get Involved** page. What are your activities to promote and bring awareness to 2023 Year of Open Science on campus? Complete the DSI **UArizona Year of Open Science** promotion and awareness form to let us know

Roots for Resilience - Department Nominations

Co-led by the Arizona Institute for Resilience (AIR), CyVerse, and the Data Science Institute, the **Roots for Resilience in Data Science Scholarship program** is recruiting for the Fall 2023 cohort. Department heads will receive an email with nomination information in April. The cohort is limited to 10 students who will each receive a $7,000 scholarship upon successful completion of the program. R4R seeks collaborative-minded PhD candidates who have completed qualifying exams and have data to work with, but have not yet defended and will not defend during the semester. The program trains students working in resilience-focused areas in the use of open science and computational infrastructure, such as CyVerse, to apply data science tools to their dissertation research and discovery and to increase their department's data science capacity. Students meet weekly for Foundational Open Science Skills (FOSS) training. They complete the program with a presentation to their department on applications and uses of CyVerse and other open science and data science tools that enhance disciplinary and interdisciplinary research.

ANNOUNCEMENTS

Data Science Ambassadors - champions for data science literacy

The Call for nominations for the Data Science Ambassadors (DSA) program is open with nominations due by May 1, 2023. DSA capitalizes on domain knowledge and data science expertise in the UArizona graduate/professional student population. DSAs serve as a resource within their college to help researchers and educators with (1) data science related questions through consults, training, and/or referrals to the right resource and experts on-campus or online and (2) developing training or other data literacy programs that are specific to needs to you and your discipline/college.

Highlighting data science projects, tools, and software

In future *The Data Drip* editions, the Data Science Institute will feature UArizona students, faculty, staff, and/or researchers' data science projects, tools, and/or software. DSI wants to shine the light on you. Email DSI to let us know what you have to share.

Coffee and Code

Coffee and Code is in-person on **Wednesdays, 8:30-10:30 AM** at **Slot Canyon Cafe** in ENR2. The Tuesday mornings gathertown remains open for CALS data science drop-ins

2023 NIH Data Management and Sharing Policy

Keep up-to-date with the 2023 NIH Data Management and Sharing Policy. Visit the **UA Libraries Data Cooperative** site to stay informed about updates and to find links to useful info and resources.

Share with the UArizona Data Science Community

- Do you have UArizona news, events, or info that you want to share with the data science community? Complete the **calendar request form** to add it to the DSI **calendar**.

- **Email the Data Science Institute** your musings and opinions on data science-related topics that you would like to share with the UArizona data science community.

- Complete the DSI **UArizona Year of Open Science** promotion and awareness form to add your activity.

- If you have open UArizona data science **positions** to post on the website, **email DSI** the details including the URL to the position posting, title, department, and requ#.

- Join the weekly **Coffee & Code**, **Hacky Hour**, **and Code Commons** meetings and events that are open to all and are great opportunities to network!

Email the Data Science Institute

CALENDAR OF ACTIVITIES

View all calendar events

APR-MAY Week Days	**Data Science Institute 1:1 Consultation** Schedule a 1:1 consultation appointment with DSI Educators – the experts in R/RStudio, Python, data analysis, data visualization, machine learning, and more in the R and Python programming languages.
APR Tuesdays 4-25	Python for Data Science Python is one of the popular languages used by many data scientists for various applications. Python provides great functionality to work in mathematics, statistics, machine learning, data visualization and scientific computing.
APR Tuesdays 4-25	Data & Viz Drop-in Meet with the Data Cooperative Specialists to get help with your data needs on Tuesdays, 9-11 AM, with in person sessions at CATalyst Studios in the Main Library or virtually when available.
APR Wednesdays 5-26	**Classical Machine Learning (ML)** Weekly workshop with on-hands training examples in the different Machine Learning algorithms, using libraries and tools from both R and Python programming languages used in real Data Science applications.
APR Thursdays 6-27	**Data Science Tapas** Speakers will present bite-sized segments in data science featuring the R or Python programming languages aimed at students and researchers interested in diving in or broadening their data science skills.

APR Fridays **7/21**	[Learning through Open Science Contributions](#) This workshop is a two-hour guide to making open source contributions, for first-timers and for veterans. Learn to why you might contribute to open science, what it means to contribute, how to orient yourself to a new project on GitHub and finally, how to find a project to work on and submit a contribution to that project.
APR **11**	**R Workshop** The Shiny package for R provides a way to transform your R code into interactive applications accessible through a web browser. This lesson provides a hands-on example of how you can use Shiny to create intuitive graphical user interfaces.
APR **17-19**	[ResBaz Arizona 2023 Festival](#) In the spirit of a marketplace or bazaar, ResBaz is a highly collaborative event where anyone, regardless of discipline or previous experience, can learn, share knowledge, find help, and have fun!
APR **24**	**Exploratory Data Analysis in R - Correlating Like a Data Master** In this workshop, attendees will conduct and visualize correlations between categorical, numerical, and discrete data variables using the dlookr R package.

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Land Acknowledgment

We respectfully acknowledge the University of Arizona is on the land and territories of Indigenous peoples. Today, Arizona is home to 22 federally recognized tribes, with Tucson being home to the O'odham and the Yaqui. Committed to diversity and inclusion, the University strives to build sustainable relationships with sovereign Native Nations and Indigenous communities through education offerings, partnerships, and community service.