THE UNIVERSITY OF ARIZONA

RESEARCH, INNOVATION & IMPACT
Data Science Institute

The Data Drip

May/June/July 2024 edition
SUMMER

A Digest of Data Science News -
University of Arizona

Data Science Institute (DSI) / **News and Activities** / **Musings and Opinions** / **Calendar**

DATA SCIENCE INSTITUTE (DSI)
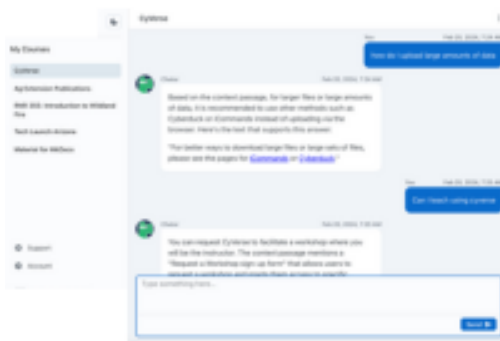
Course Chatbot

Chatbot - coming soon to a course near you

Interested in learning more about how to use a chatbot with your University of Arizona course? Complete this **brief form** or **email** Nirav Merchant, Director of the Data Science Institute.

ML/AI workshops equip faculty with "AI in Action Zone"

The Data Science Institute hosted SWEETER workshops, "Building Learning Materials to Teach Introductory Applied ML/AI", in May and June 2024 at the University of Arizona. Faculty including Arizona Western College, Navajo Technical University, and Pima Community College joined several University of Arizona experts to share

knowledge and resources to enhance their ability to teach machine learning and use artificial intelligence tools. This peer-to-peer research and training support model demonstrated its potential for replication at other regional institutional partners and academic institutions. **Read more** about the workshops and the AI in Action Zone.

Calling for AI and data science events happening this fall

Are you planning to offer AI or Data Science training or workshops this fall? Join our Data Science Institute instructors and add your workshops to the Fall 2024 University of Arizona Data Lab lineup. In support of building AI/ML knowledge throughout campus, the Data Lab aims to offer, promote and support non-curricular AI/ML training activities and events across campus. **Submit your event** or **email your request for support**. Let's include your workshops!

CALENDAR

Be sure to check regularly the **Data Science Institute's calendar** for information about useful data science workshops, trainings, and events offered by the Data Science Institute, University of Arizona Data Lab, CyVerse and other departments across the University of Arizona campus.

NEWS AND ACTIVITIES

Attend the KEYS annual research showcase!

The BIO5 Institute's annual KEYS program is one of Arizona's premier training programs for high school students interested in developing STEM skills. Show your support and attend the **18th Annual KEYS Research Showcase** on Friday, July 19, 2024.
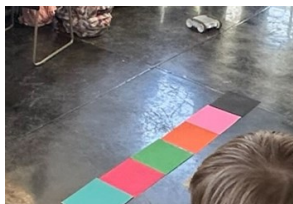
Vail middle school students use sensors and a robot to "Stop at Blue"

Middle school students at the Trailblazers Vail Blended

Learning Center were excited when learning about embedded systems and sensors on May 14, 2024. Shravan Aras was the guest speaker as part of the career speaker series which gives students an insight into various professions. Read more about his presentation with his "Stop at Blue" game and using the Sphero RVR robot. **Read more**.

CyVerse selected for pilot NSF award for translational biotechnologies

11 NSF-funded research projects to receive additional investment to accelerate the translation of research into biotechnologies with commercial and societal impacts.

Read more

Key role for CyVerse in NSF's newest synthesis center

National Synthesis Center for Emergence in the Molecular and Cellular Sciences (NCEMS) to transform data-driven research on emergent properties in molecular and cellular systems

Read more

Local Contexts Integration in CyVerse Discovery Environment

In support of indigenous data sovereignty, **Local Contexts** Labels and Notices are now displayed in the **CyVerse** Discovery Environment. Local Contexts helps Indigenous communities repatriate knowledge and participate in how data is collected, managed, displayed, accessed, and used through the use of Labels and Notices. **Learn more** from Paul Sarando's presentation.

Updated Soteria how-to guides and manuals

ANALYSIS ENCLAVE

Available to University of Arizona researchers, **Soteria** has updated **How-To Guides and Manuals**. Soteria, the secure data and analysis enclave, provides a protected data compliant environment for collaborative research, specifically for projects and datasets containing sensitive PII/PHI. **Apply now for Soteria access** and complete the required training.

Updates at UITS - High Performance Computing

More GPUs: going from 46 nodes with a single GPU to 58 total, comprising 22 single and 36 dual GPU's.
New Documentation: completely revamped the HPC documentation. We have moved from Atlassian Confluence to an open-source solution based on Python and GitHub. **Read more** from UITS.

University of Arizona RSE program growing

The University of Arizona RSE program recognizes and provides support to the community of research software professionals across campus with the goal of retaining the talent of research software engineers between research projects. Join the growing University of Arizona research software professionals community by **emailing** the Data Science Institute.

U of A
Research Software
Engineers &
Professionals
Group

Visit us at the New Graduate & Professional Student Orientation event!

Stop by the Data Science Institute, CyVerse, and ICDI tables during the **New Graduate and Professional Student Orientation event** on August 21, 2024. The event showcases a comprehensive introduction to some of the most important resources that the University of Arizona has to offer.

SAVE THE DATE
NEW GRADUATE
AND
PROFESSIONAL
STUDENT
ORIENTATION

WEDNESDAY, AUGUST 21, 2024

THE UNIVERSITY OF ARIZONA
Graduate College

MUSINGS AND OPINIONS

Zoom AI Companion now available

On June 6, **Zoom AI Companion** became available for all users on the University of Arizona enterprise Zoom account (**arizona.zoom.us**). The new AI features with AI Companion include Smart Recording and Meeting Summary that allow users to get caught up on meetings already in progress, generate meeting notes, or get assistance writing chat replies. **Read or listen** to the University of Arizona News article for more info.

CyVerse making a difference

Free data storage, and compute and cloud native resources are available to students, faculty, and staff at the University of Arizona. CyVerse, the largest publicly-funded open-source research cyberinfrastructure for life sciences, has played a crucial role in advancing data-driven research. **Read more**. Create your **University of Arizona CyVerse account**.

High Performance Computing workshops available

Every semester, the High Performance Computing team hosts training workshops on topics ranging from intro to HPC, to machine learning, to parallel computing, and beyond. Checkout the **HPC calendar of events**.

COGS 500: Computing for the Research Lab; Fall 2024 (1st 7.5 week session)

This friendly asynchronous 3-credit iCourse taught during the first 7.5 week session is ideal for students who would like to improve their abilities to contribute to research by enhancing their technical expertise and self-reliance. Contact **Dr. Dianne Patterson** for more info.
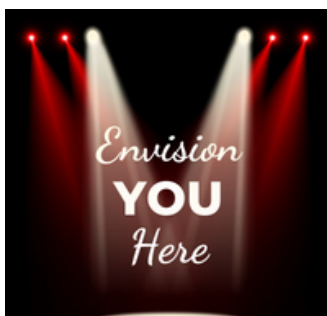
Spotlight you and your research!

The Data Drip will highlight University of Arizona students, faculty, staff, research, data science projects, tools, and/or software. DSI wants to shine the light on you. Let us know what you want to share.

Share **The Data Drip** with your friends and colleagues! They can **subscribe** by completing a brief form. Let us know if you have data science news that you want us to share in The Data Drip or on the **Data Science Institute** website.

The University of Arizona data science community is reading and sharing...

- **Meta AI Introduces Meta LLM Compiler: A State-of-the-Art LLM that Builds upon Code Llama with Improved Performance for Code Optimization and Compiler Reasoning**
- **The Responsible Foundation Model Development Cheatsheet: A Review of Tools & Resources**
- **Awesome Scientific Language Models**
- **Neural algorithmic reasoning**
- **Not all 'open source' AI models are actually open: here's a ranking**

Read more news about the University of Arizona data science community on the **Data Science Institute news** site.

CALENDAR

Take a look at the Data Science Institute's **calendar** for data science workshops that are available from across campus. To see your data science event listed below in The Data Drip and on the DSI calendar of events page, complete the DSI **calendar request form**.

May 24-Aug 2
Fridays

Summer 2024 Bayesian Learning Group
The Bayesian Learning Group is a peer learning community that meets biweekly to discuss and work through Bayesian statistics problems.

JUL
15

Intro to HPC
This is a basic Introduction to High Performance computing (HPC) workshop, a crash course on using the HPC system at the University

of Arizona.

JUL 16 **Intro to ML in Python**
We will discuss a few hands-on examples of machine learning with Python. You can run these in a Jupyter notebook, or using a batch script.

JUL 17 **Intro to Parallel Computing**
An introduction to the theory and practice of parallel computing.

JUL 18 **Statistics with Matlab**
An overview of how to use the Matlab Statistics and Machine Learning toolbox on the UArizona HPC.

JUL 19 **KEYS Student Showcase**
The cohort of 59 high school interns from across Arizona will present what they've learned this summer working side-by-side with top scientists in University of Arizona research labs.

SEPT 18 **Empowering Change: Humble Leadership in the Age of AI**
This *Understanding Before Doing* workshop session introduces a fresh perspective on leadership grounded in humility, authenticity, and a positive mental attitude.

Sept 5-Nov21 Thursdays **Foundational Open Science Skills Workshop-Fall 2024**
Learn the key principles, practices, and how-tos for doing collaborative open science using cutting-edge, open source cyberinfrastructure and tools, in a collaborative, hands-on setting.

Add me to the DSI email list.

Did a friend send this email to you? Subscribe to let us know to add you to the Data Science Institute email list. Or email the Data Science Institute so we can be of assistance to you and your research.

SUBSCRIBE TO THE DATA DRIP

EMAIL THE DATA SCIENCE INSTITUTE

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.