



This participant guide contains the most updated information and is subject to change

Last Updated: 1/15/24

Participant Guide

Welcome to Rice Datathon 2024 - we're so excited for you to be a part of this event!

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Welcome!

Datathon 2024 Directors

Datathon 2024 is organized and planned by three student Datathon Directors, who will be the main point of contact for all Datathon-related communications.



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Datathon 2024 has been made possible thanks to the gracious contributions of our sponsors, the D2K Lab, the Rice Data Science Club, and the Student Activities President's Programming Fund.

Datathon Overview

Beginner's Guide to Datathon 2024

Can I participate if I still don't have any data-science knowledge?

Yes! One of our biggest goals is to make this competition accessible for those coming in without little to no experience with data science tools and concepts.

Will I need specific data-science softwares/programs?

We expect submissions to come with a link to your source code and results, preferably on GitHub. You may use any software or language you wish to produce the code.

How can I prepare for the Datathon?

We encourage everyone to have a baseline knowledge in a few key statistics concepts coming into the datathon, including :

- T-Tests: (Are the means of two data groups statistically different?)
- Finding and interpreting the best line of fit (What does the slope mean? What does the y-intercept mean?)
- Linear Regression

Although there are multiple challenges with a specific objective and problem set, we also encourage you to take this time to explore a problem that you are personally interested in. Whether that be something related to healthcare, education, or even Rice itself, exploring your own questions by finding relevant data is a great first step into data analysis.

Please remember that viewing and working on datasets related to your project before the start of the competition will disqualify you from any prizes.

Where can I get additional resources/help?

A good place to get a good idea of the kind of projects to expect is to look at last year's [Datathon 2023's Project Gallery](#). This includes all the submissions as well as the winners.

Below are additional website resources that provide an overview of various tools, libraries, and notebooks. We encourage you to explore these resources before the Datathon!

- [Introduction to Jupyter](#)
- [Welcome to Google Colab](#)
- [Python Syntax Cheat Sheet](#)
- [Using Python First Steps](#)
- [Using Pandas and Python to Explore Data](#)
- [Plotting with Matplotlib \(Guide\)](#)

Participant Checklist

What should I have ready before the Datathon?

- Fill out the [Registration Form](#) and register for workshops!
- JOIN THE DISCORD CHANNEL! All communications will be done via Discord, so please join in order to stay updated and connect with event organizers
 - o Discord link: <https://discord.gg/YgZGJtMgBA>
- Check in at the front of Duncan Hall between 4:30 and 5:30 pm on 1/19! If you don't check-in in-person, you will NOT be eligible for prizes/titles!
- Create a team of up to 4 people (optional)

Schedule and Spaces

General Participants Schedule

Rice Datathon 2024 will take place from January 19-21, 2024. Below is a schedule of all events that sponsors will have the opportunity to participate in.

Note: Our OFFICIAL Schedule may be updated with minor changes at this link:

[2024 Datathon Participant Schedule](#), but this is a good guideline of the major events:

Friday January 19, 2024

4:30 - 5:30 pm	Participant Check-in and Sponsor Networking Duncan Hall Lobby, Martel Hall <ul style="list-style-type: none"> ● Participant Check-in begins at 4:30 pm <ul style="list-style-type: none"> ○ We highly recommend arriving close to 4:30 to ensure that you will receive an event t-shirt and seating for the opening ceremony ● Participants will then be free to network with other competitors and sponsor representatives in Martel Hall before the start of the Opening Ceremony
5:30 - 6:30 pm	Opening Ceremony McMurtry Auditorium and Zoom <ul style="list-style-type: none"> ● Datathon staff will introduce the competition, give a brief overview of the schedule, and sponsors will present their challenges ● All challenges and their datasets will be released publicly at 8:00pm
6:30 - 8:00 pm	Dinner and Team Formations Martel Hall <ul style="list-style-type: none"> ● Dinner will be served to attendees immediately following the opening ceremony
8:00 pm	TRACKS RELEASED Online <ul style="list-style-type: none"> ● All tracks will be released at approximately 8:00 pm

<p>8:00 pm - 1:00 am</p>	<p>Mentors Office Hours (after 8pm)</p> <p>Duncan Hall/Discord</p> <ul style="list-style-type: none"> • Mentors will be available both in-person and online via discord. Please see the schedule for information on specific mentor availability 2024 Datathon Participant Schedule • Virtual mentors will be using Discord voice/text channels to help participants.
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Saturday January 20, 2024

<p>11:00 am - 12:00 pm</p>	<p>MLH Mini-Event: Soroban</p> <p>Martel Hall</p> <ul style="list-style-type: none"> • Our Major League Hacking representative will be organizing a fun mini-event for all participants before lunch.
<p>12:00 - 1:00 pm</p>	<p>Lunch</p> <p>Martel Hall and Duncan Hall Lobby</p> <ul style="list-style-type: none"> • Lunch will be available to all participants and mentors who are present
<p>2:00 - 2:30 pm</p>	<p>MLH Introduction to GitHub Copilot</p> <p>Martel Hall</p> <ul style="list-style-type: none"> • Learn about tools and techniques to accelerate your use of the version control platform
<p>2:30 - 3:00 pm</p>	<p>MLH Mini-Event: Bob Ross Painting</p> <p>Martel Hall</p> <ul style="list-style-type: none"> • Take a break from hacking and join us and our MLH representative on MS Paint to enjoy The Joy of Painting!
<p>6:00 - 7:00 pm</p>	<p>Dinner</p> <p>Martel Hall and Duncan Hall Lobby</p> <ul style="list-style-type: none"> • Dinner will be available to all participants and mentors who are present

Sunday January 21, 2024

8:00 - 9:00 am	Project Submissions Due ONLINE <ul style="list-style-type: none"> ● All projects must be submitted to the devpost by 9:00 am, or they will not be able to be judged
9:00 - 10:00 am	Breakfast Martel Hall and Duncan Hall Lobby <ul style="list-style-type: none"> ● Breakfast will be available to all participants and mentors who are present
3:00 - 4:00 pm	Closing Ceremony McMurtry Auditorium <ul style="list-style-type: none"> ● Award category winners will be revealed ● Sponsors will present their own prizes for challenge-specific awards. ● Top finishers will have their presentations viewed by the audience
4:00 - 5:00 pm	Reception Duncan Hall Lobby <ul style="list-style-type: none"> ● Sponsor representatives will have one last opportunity to meet and talk with students

Mentoring Schedule

Please view the [schedule](#) for information on mentor availability

Assigned Rooms for Mentors

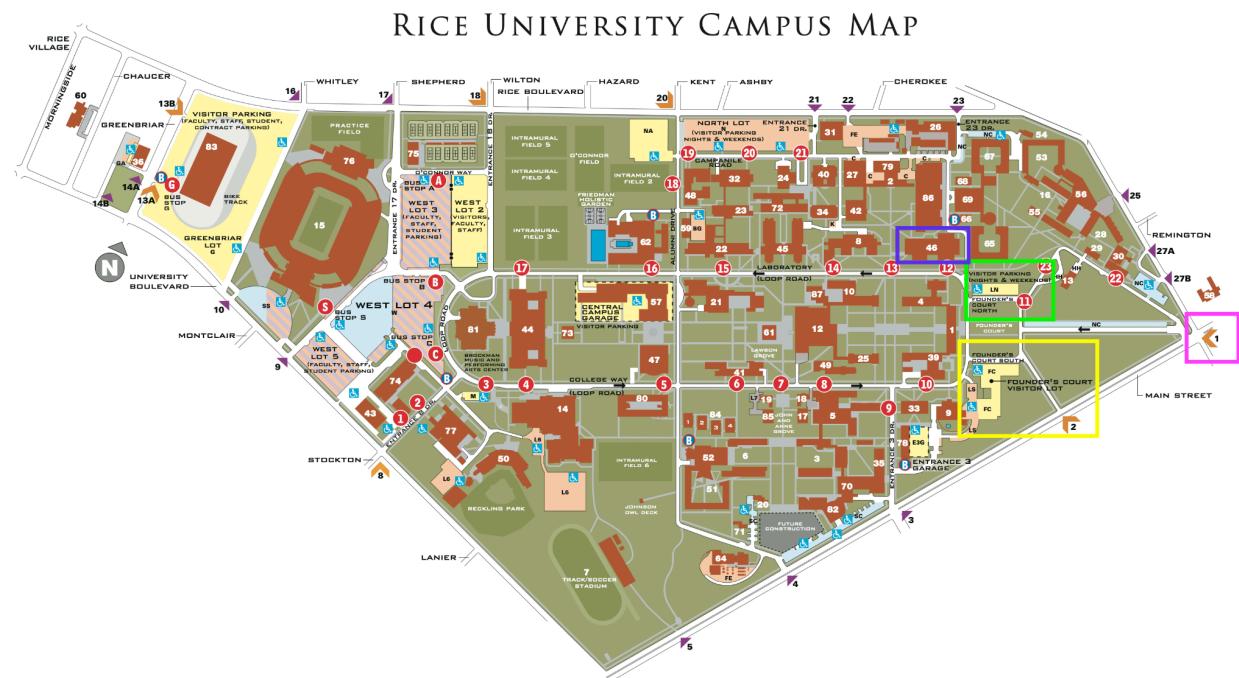
- Houston Astros - DCH 1070
- Chevron - DCH 1075
- Shell - DCH 1064
- Neurotech@Rice - DCH 1042

Open Workspaces

- Outside of defined mentor hours, all assigned mentor spaces will be open to participants for them to collaborate with their team
- DCH 1020 (Symonds Lab)
- DCH 3110
- DCH 3076

All spaces will be open from 7:00 pm on 1/19 through 3:00 pm on 1/21. Please do not eat in the classrooms; the only designated area for food is Martel Hall.

Spaces



Duncan Hall (46)

North Lovett Parking Lot (LN)

Founder's Court Visitor Parking Lot (FC)

Entrance 1 (1)

All in-person Datathon-related activities will take place in Duncan Hall. The building is situated north of Lovett Hall, the most iconic, and most photographed building on campus. The recommended location for parking is the Founder's Court Parking Lot (pictured in yellow on the map above), as it is open to visitors at all hours. The North Lovett Parking Lot is one of the closest parking lots for visitor parking, but may have limited capacity. All attendees can enter the campus via Entrance One (1) on the corner of Main Street and Sunset Boulevard. A complete Rice University map can be found [here](#) and the interactive map can be found [here](#).

If you are a guest arriving from outside of Rice, insert your credit card upon entering either lot, and pick up a parking validation during check-in. Upon exiting the lot, **please insert the parking validation FIRST into the machine**; it will keep the validation. Then, insert the credit card used at the entry and the gate will open.

Address: Anne and Charles Duncan Hall, Houston, TX 77005

A map of Duncan Hall can be found at the following link: [2024 Datathon Map](#)

Duncan Hall Lobby (Martel Hall)	
McMurtry Auditorium	
Duncan Hall Portico (outdoors)	
Main Front Entrance	

Virtual Spaces

Where will Rice Datathon 2024 take place online?

We emphasize that Rice Datathon 2024 is a physical-first competition. The opening and closing ceremony will be broadcasted live. However, networking and most of the mentoring opportunities will be in-person.

Event	Zoom Link
Opening Ceremony - Friday 5:30 pm	[ZOOM] Meeting ID: 986 5623 9785 Passcode: 375658
Mentorship - Friday 8:00pm to Saturday 2:00pm (time varies)	Will take place via Discord
Closing Ceremony - Sunday 3:00 pm	[ZOOM] Meeting ID: 964 5431 0254 Passcode: 384271

Communication

How can I stay in touch with Datathon updates?

Our main source of communication for participants will be on the [Rice Datathon 2024 Discord](#). Participants should use this server to ask questions, look for teammates, and receive live updates/announcements during the competition time.

Networking

What can I expect for networking?

Participants will have the opportunity and meet and network with various sponsor representatives throughout the Datathon. The scheduled time for networking will be from 4:30 to 5:30 pm on Friday, January 19, before the opening ceremony. Sponsors will have in-person recruiting booths.

Resources

Datathon Website

Our Datathon [Website](#) has the most up-to-date information regarding the logistics of the Datathon.

Using Discord

Discord will be our main source of communication during the competition. The official Rice Datathon 2024 Discord can be found [here](#). If you plan to connect with mentors or company representatives online, please change your display name to your full name. Here's a short tutorial on how to use Discord:

- [How Discord Works in 148,000 Milliseconds or Less](#)

Using Devpost

We will be using Devpost to collect student submissions for this competition. Our event can be found [here](#). If you are a judge, please make sure you can log into Devpost and find our event. You will be using Devpost to judge student submissions. More information about how to use Devpost will be provided at the judging brief on Sunday.

Additional Questions?

Please contact the Datathon Directors at the contact information listed on page 2

Challenges and Tracks

Challenge - what you're tackling

What is a challenge?

A challenge is a specific data problem you choose to explore and tackle for the Datathon. There will be 4 available challenges for your team to choose from. Each challenge has a unique context and objective, and varies in difficulty and complexity. Challenges provided by sponsors are created from real-world problems with real-world data sets.

Please refer to  [Opening Ceremony 24](#) for specific information about the tracks. Datasets will be released on the [Discord](#) at 8:00 PM

All sponsors will provide a prize for the top team that completes each challenge.

What are overall prizes?

Other than the 1st, 2nd, and 3rd place, there are five overall prizes that will be rewarded for aspects of your project, or team. Each team that submits a project should opt in to being considered for the honors they are eligible for on Devpost. Each honor will also come with a cash prize. Honors will be awarded at the closing ceremony along with overall prizes.

Best Underclassmen Team	All teams that are composed of all underclassmen (freshman or sophomore) are eligible to earn this honor. Projects will be evaluated holistically to include all components of visualization, accuracy, difficulty of techniques and conclusions.
Best Visualization	Projects will be judged based on the aesthetics and creativity of how the data is visualized.
Best Social Impact	Projects based on social data will be judged based on impact and implications on policies and social change.
Best Visiting Team	All teams composed of at least 2 non-Rice students are eligible to earn this honor. Projects will be evaluated holistically.
Best Interdisciplinary Team	All teams composed of at least 2 students of a different school of study are eligible to earn this honor. For example 1 Humanities, 1 Natural Science, and 2 Engineering

Submission:

How and where do I submit my project?

All projects will be submitted online on the [Rice Datathon 2024 Devpost](#) as a **video presentation** submission. Participants should refer to each challenge's description to know the objectives and expectations of each challenge. Each project submission must include some visualization of what analysis you've completed and all the code that was produced during the challenge.

Steps to Submit:

- 1) Go to the Rice 2024 Devpost page and register for the event. Then, create a project.
- 2) Once you create a project, you should see a series of steps that you must complete before submitting your project.
- 3) On “Manage team”, make sure to add **all team members** to your project. This means that **all team members must be registered for our event in Devpost. Prizes will only be allocated to individuals who are present on the Devpost (and listed in the Team**

Confirmation Form).

Untitled DRAFT 0/5 steps done

14 more hours to deadline Preview

Manage team Project overview Project details Additional info Submit

Manage team Skip step >

Add, remove, and look for teammates. If you're working alone, [skip this step.](#)

Invite teammates

Either share the link below *privately* with your teammates or send an invite link via email

Add team members via email – someone@example.com Send invite

Secret invite link

https://devpost.com/software/606706/joins/AJnnfd_pAbzq8kxWrRTuXA Copy

Current teammates

Only the project creator, [Rice Datathon](#), can remove team members.



@datathon

Save & continue Cancel

- 4) Under “Project overview”, write your Project Name and Elevator Pitch. Make sure that the Project Name is the same name as the one listed in your Team Confirmation Form. The Elevator Pitch will not be judged.
- 5) Under “Project details” fill in the “Project Story” fields. **Make sure to input your Github Repo link into the “Try it out” field.** The “About the Project” and “Built with” fields will not be judged.
- 6) Under “Project Media” upload your video demo link. **Your video must be a maximum of 3 minutes long and will be the primary material viewed by judges. You may upload a Youtube, Facebook, Vimeo, or Youku URL.** As a guide for what to include in your video, please reference the [rubric](#) in this guide.
- 7) Under “Additional Info”...
 - a) For the **Neurotech and Chevron tracks**, upload the additional supplemental material as specified in the track documents. To upload multiple files, put them in a zip file and upload the zip file. Limit: 35 MB.
 - b) Under “Sponsor/Special Prizes” select all the possible prizes for the track that you are entering and opt-in to the prizes that you are eligible for. **You must opt-in to a prize to be considered for it.** (ex: If you are a team of underclassmen from another school competing in the Chevron Track, select *Chevron Track - 1st, Chevron Track - 2nd, Best Underclassmen Team, Best Visiting Team*)
 - c) Answer which Track you are submitting the project to.
- 8) Submit your project!
- 9) Fill out the [Team Confirmation Form](#) with your teammates’ information, and ensure that all of the information (project title, team member emails) matches the information in the Devpost submission.
- 10) Celebrate!

Overall Prizes

Top teams from each challenge will be nominated to win an overall prize. The top three teams will receive the cash prizes along with a certificate.

Overall	1st: \$250 per team member
	2nd: \$175 per team member
	3rd: \$75 per team member

Challenge-Specific Prizes

Challenge's Sponsor	Prize
Chevron	1st place: Apple iPad Mini (Latest 6th Generation) 2nd place: \$100 Amazon gift card per team member
Neurotech	1st place: \$150 Amazon gift card per team member 2nd place: \$75 Amazon gift card per team member
Astros	1st place: Signed Astros Merchandise
Beginner	1st place: \$100 Amazon gift card per team member 2nd place: \$50 Amazon gift card per team member

Other Prizes

Best Underclassmen Team	1st place: \$50 Amazon gift card per team member
Best Visualization	1st place: \$50 Amazon gift card per team member
Best Social Impact	1st place: \$50 Amazon gift card per team member
Best Visiting Team	1st place: \$50 Amazon gift card per team member
Best Interdisciplinary Team	1st place: \$50 Amazon gift card per team member

Judges

Who will be judging my project?

Judging panels will consist of sponsor representatives, Rice faculty, and external judges from well-established companies.

How will my projects be judged?

Your project will be judged by a panel of at least three judges. Your projects will be evaluated by the Rice Datathon Rubric (below), as well as any additional criteria specified by the sponsor in their challenge statement. Scores assigned by the judges will be averaged to obtain the final score utilized to determine your final ranking.

Rice Datathon Rubric

Item	Description	Score
Data Wrangling	How do you clean, manipulate, and process the data to make sure the final data used in the model is clean?	1 No/minimal attempt is made to clean or manipulate the data. The raw data is used.
		2-3 Data is partially cleaned and processed.
		4-5 Data is thoroughly cleaned and processed with appropriate methods
Visualization	How do you use visualizations for exploratory data analysis and to communicate your findings?	1 No visualizations
		2-3 Visualizations present, but relationship to conclusion or exploration unclear. May lack proper labels or be difficult to interpret.
		4-5 Visualizations present with clear connections to conclusion and/or exploration. Visualizations are interpretable and properly labeled.
Findings and Analysis	How do you interpret the findings of your project? What analysis do you perform on your results?	1 Missing analysis/minimal analysis conducted.
		2-3 Some analysis is conducted with insight.
		4-5 Analysis is thoroughly conducted with interesting insights. There is potential for future investigation.
Technical Skill	Does your work use innovative and appropriate models, methodologies, or approaches?	1 Incorrect/unreasonable models and methodologies used
		2-3 Reasonable models and methodologies used
		4-5 Optimal/innovative models and methodologies used
Track-Specific Evaluation	Certain tracks may have track-specific criteria, such as accuracy scores, which will be specified on the track document.	

Mentorships and Workshops

Mentors

Will I get a mentor if I have no data-science experience?

Yes- throughout the Datathon, mentors will be available to answer questions and provide guidance, for participants of all levels. Mentors are freely available during the competition period.

Mentors will be available both in-person and virtually. The mentor's schedule is on the Datathon Master Schedule (tinyurl.com/ricedatathonschedule) on the "Mentor Schedule" tab, which has all the most-updated information regarding where and when each mentor is available. We've made all our mentors accessible to everyone regardless of where you are participating, and hope you can use them for any questions you may have.

Workshops

What workshops are available for me to attend?

We will be hosting two workshops *before* the Datathon to help you prepare. These workshops are subject to in-person capacity limits and will be delivered in a hybrid format. After these workshops have passed, you can find the recordings on the "bill-workshop" and "beginner's-workshop" channels in the Discord server respectively.

Workshop 1: How to Get Into Data Science	<p>Discover the ins and outs of data science internships and recruiting. Learn about different job opportunities, interview tips and tricks, and resources to help you on your data science journey.</p> <p>Time: January 16th, 6:00-7:00 pm</p> <p>Location: Zoom only due to Rice Campus Closure</p> <p>Zoom: Zoom Link</p> <p>Presenter: Grace Wang, Anthony Yan, Olivia Kaneko</p>
Workshop 2: Beginner's Workshop	<p>Learn the basics of Data Science and familiarize yourself with all the skills and packages necessary to succeed on the beginner track.</p> <p>Time: Thursday, January 18th, 5:30-6:30 pm</p> <p>Location: Duncan Hall 1064 and on Zoom</p> <p>Zoom: Zoom Link</p> <p>Prerequisites: Basic python preferred</p> <p>Presenters: Grace Wang</p>

Frequently Asked Questions

How many people and who can be on a team?

You can select your own teammates and create a team of up to 4 people. All participants on the team must register individually and meet the eligibility to participate.

Can I participate entirely virtually?

Yes! However, your team's submission will only be eligible for prizes/titles only if ALL members of your team checked in in-person.

Can I work off campus after checking in on campus?

Every member of your team has to be checked in on campus for your team to be eligible for prizes. You don't have to stay on campus for the entire competition, but attending the opening and closing ceremony is encouraged.

What if I missed the check-in period?

If you missed the check-in period from 4:30pm to 5:30pm on Friday, please go to the help desk located in Martel Hall (the big opening area inside Duncan Hall) for assistance after the opening ceremony.

Is cross-hackathon submission allowed?

Cross submission is allowed as long as the content of the project is made within the timeframe of the datathon. Otherwise your project will be disqualified for prizes.

Can I choose my own dataset outside the provided challenges?

You may choose your own dataset. In that case you will not be eligible for the challenge-specific prizes, but are still eligible for the overall prizes.

How many challenges/honors can I get prizes for?

Each team can only submit to one challenge. Teams can only win one challenge prize and one honor. If a team is nominated for multiple honors, they will receive the honor that has the highest prize amount.

How can my team be eligible for the Best Visiting Team award?

To be eligible for Best Visiting Team, at least two of your team members have to be non-Rice students.

Sponsors and Recognitions

Special Thanks to our sponsors for supporting and funding Rice Datathon 2024



Special thanks

We'd also like to extend a special thanks to all those that have made this Datathon possible. First, we'd like to thank D2K faculty Brittney Chambers and Jyotikrishna Dass for supporting and guiding our team, along with the previous Datathon Directors for their advice and recommendations. We also want to thank our sponsor representatives, mentors, judges, and workshop hosts for creating a comprehensive Datathon experience for our data-science community. Most of all, we thank all of you participants for dedicating a weekend towards competing in the event. We hope to see you next year for the 7th Annual Rice Datathon!