

The DataJam Download

Official Newsletter of the Pittsburgh DataWorks



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DataJam Project Proposal Template

School Name (& Team Number if there is more than one team/school):
Project Title:
Team Member Names:

Problem:
IN THE FORM OF A QUESTION STATE WHAT PROBLEM YOUR DATAJAM PROJECT
WILL ADDRESS?

Why is it Important?:
IN A PARAGRAPH EXPLAIN WHY THIS IS AN IMPORTANT QUESTION AND WHO
WOULD BE INTERESTED IN THE ANSWER.

Proposals for the 2023 DataJam are due **Friday, December 2, 2022**. However, the deadline is flexible and if your team will be submitting a proposal later, just email us at datajam@pghdataworks.org and let us know when to expect your proposal. See page 6 of the 2023 DataJam Guidebook (that can be downloaded from the bottom of the *DataJam* page at the Pittsburgh DataWorks website (pghdataworks.org) for the Proposal Template. Email your completed proposal to datajam@pghdataworks.org.

Kevin Gallagher, DataJam Team Teacher Advisor at Keystone Oaks, wins national award

Kevin Gallagher is a computer science teacher at Keystone Oaks and the teacher advisor for the Keystone Oaks DataJam team. He is one of five teachers across public schools around the country honored as being one of the best. Gallagher graduated from Keystone Oaks and has been a teacher in the district for 26 years.

The National Education Association (N.E.A.) has rewarded Gallagher with the Horace Mann Award. The award goes to the best and brightest public educators in the country. According to the N.E.A. website winners are selected by an expert panel that highlight "top educators [that] stand out for their leadership inside and out of the classroom – demonstrating expertise in their practice, advocating for their students and the profession, manifesting a commitment to equity and diversity, engaging their communities, and supporting other educators in the learning process."

Congratulations Mr. Gallagher!



New DataJam Resources Coming in January 2023

DataJam Mentors have been hard at work this Fall developing new Resources for DataJam teams. These resources include very helpful guides on how to find datasets to answer research questions, as well as more guides on various analytical procedures. New Resources will be available on the pghdataworks.org website starting in early January 2023 and will be featured in the January newsletter.

PITTSBURGH DATAWORKS HOME ABOUT DATAJAM RESOURCES MENTORS CLASSROOM ACTIVITIES

Resources

This page is meant to provide students with tutorials and resources that can help troubleshoot your DataJam project. Resources include brief guides on Excel, Tableau Public, basic statistics, and presentation/poster formatting. In addition, helpful links are provided for you to access data sets.

How to Conduct a DataJam Project

Meet the Mentors

Erin O'Neill



Hello! My name is Erin O'Neill, and I am a senior at the University of Pittsburgh majoring in Statistics and Mathematics-Economics with a minor in Classical Civilizations. I am really excited to continue to mentor DataJam teams this year!

My interest in data analytics really took off two summers ago, when I worked as a Data Analytics intern at a large engineering company. I originally took the internship position because I had interest in the statistical quality assurance work the position included, but as the summer continued, I enjoyed the data analytics portion of the position more and more. Since then, I have taken more data analytics an Industrial Engineering Class called "Data for Social Good".

One thing I love about data and data analytics is that it is so versatile. I believe that almost everyone can find some aspect of data and data analytics that interests them and that these interests can change through time. When I first started learning about data analytics, I most enjoyed creating visually appealing plots to help better understand different aspects of the data. Next, I most enjoyed working with the data to get it ready for analysis and being able to use my newly developed coding knowledge to transform the data. However, recently I have been getting more and more interested with looking into some of the social and ethical implications of Big Data and data analytics, such as protecting personal data through something called differential privacy.

DataJam has been a great opportunity to share my passion for data with others. I think that I would have really benefited from and enjoyed being on a DataJam team when I was in high school. Now, I am grateful to be able to help bring this opportunity to other students. Although I feel I have a lot to share as a mentor, I have also learned so much from my team members. I enjoy learning about students' passions and seeing the results of their projects. I also have learned a lot from watching how students consider a project and watching them problem solve. I am excited to see what this year's DataJam teaches me and to see how much I can share and teach through my role as a mentor!

Zac Lindquist



It was my senior year of high school when I took my first statistics courses (which was just last year; I'm now a freshman at the University of Pittsburgh). My first course was AP Statistics, and my other one was college Elementary Statistics (which was a 2nd semester course) through Jamestown Community College (JCC). Fun fact, I had Elementary Stats first period and AP Stats second period!

I was always good at math, but I'd never taken statistics before, so when we started, it was completely alien to me. Statistics is a different type of math, as it is less algebra based and more analytically based, which was scary at first but trust me, it does eventually make sense! I had a great teacher, named Mrs. Price, who made stats seem very approachable and easy to comprehend, and I am very thankful for that. This year, I reached out to her to see if she wanted to have her Elementary Stats class do the DataJam, and now I am their mentor! I am looking forward to mentoring them because I come from a very small school and everyone was close, so it will be good for them because there is a familiar face involved, and good for me because I know them all so I can help in the best way possible. This is the Bemus Point team --- the first New York DataJam team!

As I progressed through AP Stats and Elementary Stats, I realized that data science was oddly interesting. I found it so because of how applicable it is in the real world. You will most likely never need to use the quadratic equation or the Pythagorean Theorem after high school or college but understanding data science will help you understand things like graphics on the news and if they are accurately and fairly presenting data.

About a week into college, I got an email from the honors college giving a list of things called preceptorials to do, as they were required. I saw the DataJam on there, and I knew that was the one I wanted to do, since I am interested in statistics. I went to the meeting and decided I wanted to be involved.

I am majoring in neuroscience on a pre-medicine track, but I am also considering doing a dual major or minor in statistics.

Meet the Data Science Professional

Catherine Cramer

Greetings everyone! My name is Catherine Cramer, and I am a member of the Pittsburgh DataWorks Advisory Board. I work at the San Diego Supercomputer Center (SDSC) at the University of California San Diego, where I am Director of Outreach and Engagement for Data Initiatives. I was first introduced to DataJam in 2015 through the Northeast Big Data Innovation Hub, and I've been working closely with Dr. Cameron on DataJam activities since 2020. My career in data science began when I was working as a science writer covering fisheries regulations, which are all about data. I became very interested in exploring how fisheries data are collected and analyzed. That led to my work on a very large project funded by the National Science Foundation (NSF) called Centers for Ocean Science Education Excellence, where I worked as Communications Director for almost 10 years. The person who ran the project is a chemical oceanographer whose research uses the data gathered from networks of sensors that he places in specific marine locations, and my exposure to his research got me interested in how networks themselves work. I soon discovered Network Science, a relatively new field of scientific research which is all about how networks function - whether you are looking at networks of cells, air traffic, viruses, money, electrical grids, people -- all networks operate under the same properties.



My fascination with networks led me to work on another NSF-funded project called Network Science for a New Generation, in which we worked with high school students, introducing them to network science and mentoring them through a year-long research project of their own choosing. (This program structure might sound familiar to you!) These students also helped to develop the Network Literacy Essential Concepts (<https://sites.google.com/a/binghamton.edu/netscied/teaching-learning/network-concepts>). I realized then that my primary interest was in helping students to get excited about science to solve problems that are meaningful to them - particularly high school students who are from communities that may not have the opportunity to be introduced to network science and data science. And that's what I am doing today!

Today I am on the Board of the Network Science Society (<https://netsociety.net/home>) and every year I help organize a conference on network science education. And of course, I am also thrilled to still be working with Dr. Cameron and members of the DataJam Advisory Board - and all of you! As part of my job at SDSC I am constantly looking for potential new schools and groups to work with - public schools, indigenous communities, homeless students, immigrant families - and get them excited about data through DataJam. As you can see, my career took some twists and turns but one thing that has always been true is I followed my interests, which has led me to doing exactly what I want to be doing most! I feel incredibly fortunate.

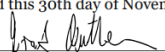
COMMUNITY BUILDING AWARD

PRESENTED ON BEHALF OF THE
SAN DIEGO SUPERCOMPUTER CENTER
TO

CATHERINE CRAMER & KIM MANN BRUCH

For your extraordinary work Building the DataJam program at SDSC for students at the Pala Indian Reservation. The DataJam Team chose a water quality project that won an award for Best Team and was accepted as a poster at PEARC. The final project was delivered in both English and Cupeño, in which the students received tutoring and translation assistance from one of their Elders. We are grateful to you for building this impressive and important community.

Awarded this 30th day of November, 2022


Frank Wuerthwein, Director

See the DataJam Timeline for 2022-2023

On the DataJam page of the website the new 2023 DataJam Timeline has been posted. Click [here](#) to see the Timeline.

- **Proposals due Fri., Dec. 2, 2022 (*Note—the deadline is flexible; just let us know if your team will submit later and give us an approximation of when to expect your proposal)**
- **Feedback will be received by Fri., Dec. 16, 2022**
- **Posters will be due Fri., March 31, 2023**
- **2023 DataJam Finale will be Thur., April 27, 2023**

FRIDAY, DECEMBER 2, 2022

DataJam Proposals Due

Teams should email their DataJam proposal to DataJam@pghdataworks.org. Use the template provided in the DataJam Guidebook, located at the bottom of this page.

FRIDAY, DECEMBER 16, 2022

Feedback will be provided on DataJam proposals soon after they are submitted

Pittsburgh DataWorks Advisory Board will provide feedback to each DataJam team about their proposal. Proposals will be accepted, and students encouraged to start working on their project, or suggestions will be made for proposal modifications before the proposal will be accepted.

We are looking forward to DataJam 2023!

We Hope You Are Too!

Email us at datajam@pghdataworks.org when you are ready to start working with a DataJam Mentor!