



# DATA THON

CLIMATE SUSTAINABILITY

## TOOLKIT

# 2023 Women in Data Datathon

## Climate Sustainability

This year, we are delighted to partner with the World Meteorological Organization (WMO) and the United States Department of Agriculture (USDA) to focus our efforts on climate sustainability. Teams will select from one of three problem statements to tackle, and the outcomes of their projects will be utilized to offer valuable insights, recommendations, and predictive models for fostering a sustainable future.



WORLD  
METEOROLOGICAL  
ORGANIZATION







# Datathon Rules

- Your team must include 2-5 people. You may update your team at any time as long as only 2-5 people are included in the final project submission.
- Your team can explore any topic related to our three problem statements.
- We have provided sample datasets, however, you can use any data that is relevant and publicly accessible. Please ensure you are following appropriate privacy, security and data accessibility guidelines that may exist in your country.
- Your team must submit a video presentation no longer than 5 minutes in length by **October 10 at 8:00 PM ET**. More details on your presentation requirements are included later in this toolkit.
- Have fun and always be respectful of your teammates, and other teams participating in the Datathon.
- Women in Data's 2023 Datathon judges will select three winning teams. No cash prizes will be awarded during this datathon. Winners will receive public recognition across Women in Data's website, social media and more.

# Judging Criteria



## Your final project that will be judged on:

- Definition of the problem statement and stakeholders (5 points)
- Analysis (5 points)
- Impact of the analysis (5 points)

## Across these areas, judges will be looking for:

- Clarity
- Thoroughness
- Creativity
- Cleanliness of your analysis
- Actionable insights



# Tools



You are welcome to use any open source or licensed tool you have access too.

In addition, here some tools you may want to use throughout the Datathon. You are not limited to using these:

- [GoogleColab](#) (for analysis)
- [Tableau Public](#) (visualization)
- [Power BI](#) (visualization)
- [Python](#) (visualization or analysis, or model building)
- [Hugging Face](#) (ML modeling)
- [Miro](#) (brainstorming)
- [Figma](#) (brainstorming)
- [Notion](#) (notes)
- [Canva](#) (presentations)

# Suggested Timeline

HOW TO STAY ON TRACK

**Week 1**

Research & Data  
Discovery



**Week 2**

Feature Engineering  
Or Data Cleansing



**Week 3**

Data Analysis Or  
Model Development



**Week 4**

Insights &  
Presentation

# 1. Research & Data Discovery

When applying, you and your team selected one of the three problem statements.

Please view the next slide for a link to all background info and datasets for your problem statement.

During this week your goal should be to understand the problem, data provided, and outline your analysis approach.





WORLD  
METEOROLOGICAL  
ORGANIZATION

# Heatwave Warning Systems

Find a systematic approach to monitor, predict, and communicate the occurrence of heat waves in order to reduce the adverse impacts on human health, infrastructure, and the environment.

You can find all problem statement info and provided dataset [here](#)







WORLD  
METEOROLOGICAL  
ORGANIZATION

# Investments in Climate Services & Early Warning Systems

Assess the climate finance flows dedicated to climate services and early warning projects there is the need to analyze adaptation-related projects financed by various major climate change funding sources.

You can find all problem statement info and provided dataset [here](#)





# Climate Risk Viewer

Assess climate change vulnerabilities and risks to watersheds, areas important for biodiversity and species at risk, carbon, and mature and old-growth characteristics.

You can find all problem statement info and provided dataset [here](#)







# 2.

# Feature Engineering or Data Cleansing

After performing data discover, and how you would like to approach the problem statement, we recommend you take a deeper dive with either feature engineer or data cleansing.

# 3.

# Data Analysis or Model Development

Now that you have your data (and you cleaned it!), you're ready to start analyzing, building models or visualizing your insights.





# 4.

# Insights & Presentation

The final step is to turn your analysis into insights and find the best way to visually present your project.

Teams must submit a video presentation no longer than 5 minutes in length. The details of what should be included in this presentation are available on the next slide.

# Presentation Outline

You can create your presentation in any format but many find it best to use PowerPoint or Google Slides and record their presentation using Zoom or other video presentation platform. Your final project must be submitted as a **video file**.

Here are some items you should include in your presentation:

- Introduce your team (you must only have 2-5 people on your team)
- Share your problem statement and intended stakeholder(s)
- Demonstrate and show your approach to solving the problem. Please cite the datasets and resources used. (don't be afraid to share any mistakes or troubleshooting you had to navigate during your analysis)
- Share any insights (think about using data visualization to help showcase your insights)
- Provide recommendations and actionable next steps



# Submitting Your Project

**All projects are due by October 10 at 8:00 PM ET.**

**Projects will be submitted here:**

**<https://forms.gle/v7gUBEFTGJeaNqjE6>**

You may submit your project anytime between the start of the Datathon (September 14) and October 12. You may only submit one project for your team.

If you encounter any problem submitting your project, please post a question in the Datathon channels.



# FAQs

Submit any questions [here](#):



We will be updating this toolkit with answers to FAQs throughout the datathon.