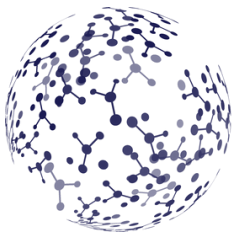

DATASCIENCEGO

HACKATHON

Hackathon Booklet

DATASCIENCEGO HACKATHON

Event Summary

The first DataScience**GO** Hackathon is an event where you will practice your skills with a real-world challenge, expand your network, have the opportunity to collaborate with colleagues, and get a chance to win prizes. The event is mainly designed to foster education and teamwork, with a common main goal of driving data from its “raw” form all the way through to a final "product" (e.g. visualization, model, insight). To make it more fun, we will have a light competitive aspect where teams will present their work at end of the event to a panel of judges, with prizes awarded in several categories *(see below)*.

The event will start with the challenge presentation, where we will go over the case and get you set up. It will be followed by working sessions where teams will explore, analyze, and prepare the dataset to create the final presentation *(see schedule below)*.

Participants will work in small teams (3 - 5 people). The teams will be assigned 24 hours before the event.

This event is open to data scientists and enthusiasts of all levels, from the beginner to the highly experienced. If you are a beginner, you are highly encouraged to join. Because we value teamwork, assisting others, both within and between teams, is highly encouraged.

Goals of the Hackathon

The hackathon is primarily an educational event, not a competition. However, the hackathon is framed in the context of a light competition to provide overall structure, including team-based collaboration, the presentation of final work, judging, and prizes.

Event Details

September 30th, 2020 - 8.30 am - 6.30 pm PT - Hopin Virtual Events Platform

Schedule

Event Opening: 8:30 AM PT - 9:00 AM PT
Working Time: 9:00 AM PT - 12:00 PM PT
Break: 12:00 PM PT - 1:30 PM PT
Working Time and Mentoring Sessions: 1:30 PM PT- 4:30 PM PT
Team Presentations: 4:30 PM PT - 5:30 PM PT
Break: 5:30 PM PT - 6 PM PT
Prize Awarding and Event Closing: 6:00 PM PT - 6:30 PM PT

Rules

- All participants must register for the event and have a valid ticket to attend.
- All participants must abide by the DataScienceGO code of conduct and terms and conditions.
- Participants are free to use any programming language or tool for their work. However we strongly encourage open source tools.
- We ask that the final submissions from the teams are a result of work performed during the event. Please do not use any previous work you or others may have produced as part of team submissions.

Communication Channels

The teams will use Hopin to work on the cases, however, we will set-up a Slack channel for communication and file-sharing.
You will receive a link to join #hackathon-30September channel by e-mail.
To familiarize with the Hopin Platform please watch this video

Team Formation

- All participants will work on teams between 3 and 5 people arranged 24 hours before the event.
- Teams will select a team name. Assisting others within and between teams is highly encouraged.
- Award Categories and Prizes: See the presentation guidelines for the requirements.
- The team prizes will be determined by a panel of judges using the following judging guidelines. The judge's decision is final.

Below is a list of the awards and prizes that may be given out. DataScienceGO reserves the right to change the awards without further notice.

BEST MODEL (Group - up to 5 people)
SDS Memberships (5) and Books (5)

BEST PRESENTATION (Group - up to 5 people)
Tableau Certification Courses (5) and Books (5)

MOST HELPFUL PERSON (1 participant)
DSGO Virtual Premium Ticket

EVERYONE (50 participants)
1 Udemy course for each participant and a participation certificate.

Evaluation Criteria

Criteria for Best Model and Best Presentation:

1. **Relevance & Innovation:**
   - Mean Absolute Error.
   - Creative new ideas or methods used.

2. **Assumptions and model-building process:**
   - Assumptions taken into consideration to build the model and data management.

3. **Presentation:**
   - Time management (20%)
   - Visual Aids (30%)
   - Communication (50%)

Criteria for the Most Helpful Person:

The award for Most Helpful Person Award will be decided by using a cumulative voting system. In this system, each participant is given 3 votes that they can reward other participants for being helpful. You can assign multiple points to one participant. Voting for oneself or one's team members is prohibited. The idea is to award points to individuals on other teams. The person with the most overall votes wins. When voting opens, you will receive an email with a link to a website. Use the link to cast your votes. You will need to vote before voting closes at 5.30 PM on the day of the event.

Cheating

Our team will be present during the activity to guide you and help you make the most out of this experience, not to monitor if you are cheating or not.

If you cheat in an activity like this, you are failing yourself and your teammates. In real-life, it is highly likely that you cannot find the solutions to your life and work challenges online. You have to put the effort, learn, and come up with solutions.

The purpose of this Hackathon is that you have fun, learn new things, and build relationships. Don’t ruin your chance to achieve those things by taking shortcuts.

Hackathon Activity: Context

Meat consumption is related to living standards, diet, livestock production and consumer prices, as well as macroeconomic uncertainty and shocks to GDP. Compared to other commodities, meat is characterized by high production costs and high output prices. Meat demand is associated with higher incomes and a shift - due to urbanization - to food consumption changes that favors increased proteins from animal sources in diets. While the global meat industry provides food and a livelihood for billions of people, it also has significant environmental and health consequences for the planet.

The Data

This indicator is presented for beef and veal, pig, poultry, and sheep. Meat consumption is measured in thousand tons of carcass weight (except for poultry expressed as ready to cook weight) and in kilograms of retail weight per capita. Carcass weight to retail weight conversion factors are: 0.7 for beef and veal, 0.78 for pig meat, and 0.88 for both sheep meat and poultry meat. OECD total excludes Iceland but includes all EU28 countries.

GitHub Repo: Please clone the following repo before the event and pull https://github.com/dsgovirtual/Hackathon-30sept

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The Challenge

Build a model to extrapolate Meat Consumption in New Zealand, Great Britain, and Argentina for the period 2010-2019.

Meat consumption has a direct impact in the economy and environmental health of the planet. To maintain the increasing demand for proteins from animal sources, a direct detriment of water resources, land and air quality must occur. At the same time, many people around the world are shifting their consumer behavior towards plant-based diets as a way of contributing to reduce their environmental impact.

A model that predicts meat consumption across different countries and regions may be able to help build strategies to reduce meat overproduction and mitigate the negative impact on the environment.

The goal of this task is to build a model that predicts meat consumption in three specific and culturally different countries that can be accurately applied to other scenarios.

Expected Submission

- Submission is expected to be made by 4.15 PM to support@datasciencego.com
- Submission can be a Webapp or a Github repository, including the notebook that implements the full lifecycle of data preparation, model creation and evaluation. Source code and information used for the challenge in CSV format.
- PDF presentation (5 slides max) with your observations, predictions, and conclusions. At the end of the activity, your team will have 5 minutes to present the results.

With this model, you should produce a table in the following format for the three countries specified above:

- Location: Country (NZL, GBR, ARG)
- Subject: The type of meat (pig, beef, etc.)
- Measure: KG_CAP
- Time: Year (YYYY)
- Value: Meat consumption expressed in kilograms of retail weight per capita.

The notebook should contain:

- Any steps you take to prepare the data
- You assumptions
- Training of your model
- The table mentioned above

Final notes

References and Acknowledgements:OECD (2020), Meat consumption (indicator). doi: 10.1787/fa290fd0-en (Accessed on 10 September 2020)

By participating in the Hackathon you abide to the T&C, Code of conduct of both DataScienceGO and the DataScienceGO Hackathon.