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## PRACTICE Beginner Challenge

Can you predict air quality in cities around the world using satellite data?

Prize

Knowledge

Time

Ended ~1 month ago

Participants

110 active · 374 enrolled

Helping

Africa

Good for beginners   Prediction   Safety

[Info](#) [Data](#) [Discussions](#) [Leaderboard](#) [Team](#) [Submissions](#)

Get a score

## Description

- Sign up for the event here: [https://invtdu.to/\\_lde1x](https://invtdu.to/_lde1x)
- Join our [discord channel](#)
- Join the [UmojaHack2023 Beginner Challenge](#).

*This is the official intermediate practice challenge for UmojaHack Africa 2023.*



### *Meet the winners of the #ZindiWeekendz the Urban Air Pollution Challenge*

You may have seen recent news articles stating that air quality has improved due to COVID-19. This is true for some locations, but as always the truth is a little more complicated. In parts of many African cities, air quality seems to be getting worse as more people stay at home. For this challenge we'll be digging deeper into the data, finding ways to track air quality and how it is changing, even in places without ground-based sensors. This information will be especially useful in the face of the current crisis, since poor air quality makes a respiratory disease like COVID-19 more dangerous.

We've collected weather data and daily observations from the Sentinel 5P satellite tracking various pollutants in the atmosphere. Your goal is to use this information to predict PM2.5 particulate matter concentration (a common measure of air quality that normally requires ground-based sensors to measure) every day for each city. The data covers the last three months, spanning hundreds of cities across the globe.

### **About World Air Quality Index**

The *World Air Quality Index* project is a non-profit project started in 2007. Its mission is to promote air pollution awareness for citizens and provide a unified and world-wide air quality information. The project is providing transparent air quality information for more than 100 countries, covering more than 12,000 stations in 1000 major cities, via those two websites: [aqicn.org](https://aqicn.org) and [waqi.info](https://waqi.info)

## Evaluation

The error metric for this competition is the [Root Mean Squared Error](#).



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Place_ID	X	Date	target
00S9LVX	X	2020-01-02	2
00S9LVX	X	2020-01-03	91
00S9LVX	X	2020-01-04	34

## Prizes

This is a learning competition. Aside from knowledge, there are no prizes for this competition.

You will receive 25 points for your first submission and 50 points for your first non-sample submission. You can read more about [Zindi points here](#).

## Timeline

Competition closes on 16 March 2023.

Final submissions must be received by 11:59 PM GMT.

We reserve the right to update the contest timeline if necessary.

## How to get started with Zindi



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## How to enrol in your first Zindi competition



## How to create a team on Zindi

## How to create a team on Zindi



## How to update your profile on Zindi

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## Rules

As this is a learning challenge, aside from the rules in the Terms of Use, no other particular rules apply. This challenge is open to all and not restricted to any country.

### Teams and collaboration

You may participate in this competition as an individual or in a team of up to four people. When creating a team, the team must have a total submission count less than or equal to the maximum allowable submissions as of the formation date. A team will be allowed the maximum number of submissions for the competition, minus the highest number of submissions among team members at team formation.

Multiple accounts per user are not permitted, and neither is collaboration or membership across multiple teams. Individuals and their submissions originating from multiple accounts will be disqualified.

Code must not be shared privately outside of a team. Any code that is shared, must be made available to all competition participants through the platform. (i.e. on the discussion boards).

### Datasets and packages

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You may use only the datasets provided for this competition. Automated machine learning tools such as automl are not permitted.

If the challenge is a computer vision challenge, image metadata (Image size, aspect ratio, pixel count, etc) may not be used in your submission.

You may only use the data sets provided. External data is not allowed.

You may use pretrained models as long as they are openly available to everyone.

The data used in this competition is the sole property of Zindi and the competition host. You may not transmit, duplicate, publish, redistribute or otherwise provide or make available any competition data to any party not participating in the Competition (this includes uploading the data to any public site such as Kaggle or GitHub). You may upload, store and work with the data on any cloud platform such as Google Colab, AWS or similar, as long as 1) the data remains private and 2) doing so does not contravene Zindi's rules of use.

You must notify Zindi immediately upon learning of any unauthorised transmission of or unauthorised access to the competition data, and work with Zindi to rectify any unauthorised transmission or access.

Your solution must not infringe the rights of any third party.

## **Submissions and winning**

You may make a maximum of 10 submissions per day.

Note that to count, your submission must first pass processing. If your submission fails during the processing step, it will not be counted and not receive a score; nor will it count against your daily submission limit. If you encounter problems with your submission file, your best course of action is to ask for advice on the Competition's discussion forum.

Note that there is no public/private leaderboard split for this challenge. Read more about public and private leaderboards [in this post](#).

You acknowledge and agree that Zindi may, without any obligation to do so, remove or disqualify an individual, team, or account if Zindi believes that such individual, team, or account is in

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Zindi also reserves the right to disqualify you and/or your submissions from any competition if we believe that you violated the rules or violated the spirit of the competition or the platform in any other way. The disqualifications are irrespective of your position on the leaderboard and completely at the discretion of Zindi.

Please refer to the FAQs and Terms of Use for additional rules that may apply to this competition. We reserve the right to update these rules at any time.

## Events

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## Contacts

[zindi@zindi.africa](mailto:zindi@zindi.africa)

## Info

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FAQs

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