KPMG

Hackathon 2022

Case study

University trend

Participant Manual

Napoli, Università Federico II

May-June 2022

Welcome

Welcome to the KPMG Lighthouse Hackathon!
For this Hackathon you will be able to access some data sets from different web sources, such as MIUR and ISTAT. Your goal is to analyze and describe the following case studies, making the most of the datasets provided or available online.

Context

This hackathon is placed in the national university context: the various analysis are oriented to the research of trends related to the enrollment of students in the different courses of study.

Problems of interest

You have to choose at least **one** of the following case studies.

1. Analise and describe university careers trends in Italy. Extract meaningful and interesting information using data such as demographics, fields of study, personal background, and employment opportunities.
2. Analise and describe the decentralization of university site choices trends. Which are the main choices of the off-site students, and why? You can use historical data such as education, demographics, or any other source you believe is interesting for the scope.
3. Predict the enrollment trend based on hystorical data and factors such as education, demographics or any other factors you may discover.

Try to produce a consistent storytelling and identify some major KPIs which can help a student in decision making process, using data visualization tools (PowerBi, Qlik Sense, …).

Surprise us!

You might also like to take this opportunity to surprise us by applying the best of your machine learning and artificial intelligence technology to showcase what is possible with the provided set of data.
Furthermore, you're free to integrate the datasets we provided with any kind of open-data you are able to retrieve that could help you in the analysis phase.

The data

You get access to the following data sets:

1 Education - MIUR - The dataset contains the number of students enrolled in Italy. (e.g. matriculate students divided by University, type of study course, by residence, etc.).
2 Education - ISTAT – The dataset contains information about study courses from the academic year 2012/13: enrollments, students and graduates by degrees, courses and disciplinary groups. In the picture is shown the selection of the data you need.

1 Enrolled - ISTAT - The dataset contains information about students enrolled in Italy since 2008, divided by Type of University, Gender and Group of degree programs
2 Graduates - ISTAT - The dataset contains information about graduates in Italy from 2007 to 2016 divided by Gender, University type and group of degree courses

The Rules

- Your team will have 21 days to complete the challenge
- Each team will consist of a minimum of 2 and a maximum of 4 participants.
- Registration are also allowed to solo participants who will be organized in groups by KPMG.
- Each member of the group must participate to the presentation of the project.
- The Hackathon closes at 12pm Sunday June 5th. You must submit slides summarizing key findings, insights and recommendations before then.
    - Please submit to: TBD

Submission

Your submission on Sunday June 5th must include slides summarizing key findings, insights and recommendations. You are free to choose your presentation format for your 15-min pitch (slides, live demo …). The final material for your 15-min pitch has to be ready at the moment of your assigned time slot.
Each team should have their material for the 30 min presentation ready on the day of their scheduled time slot.

Judging criteria

First round:

In the first round each team delivers a 15-minute 'pitch style' presentation. Participants will be judged on a combination of technical and non-technical factors, including but not limited to:

- Techniques used
- Communication of outputs
- Presentation

The top 3 teams will be selected to progress to the second round.

Second round:

In the second round each team will deliver a 30-minute presentation. Participants will also be judged on a combination of technical and non-technical factors.

Grand Prize

Winning team:

- Apple Airpods (for each member of the winning team)

Hackathon TimeLine