

Challenge Proposal:

[Understanding Covid19 in Cities through Mobility Data]

Context / Description

Being mobility one of the biggest challenge's cities face today, the COVID-19 pandemic reinforced this challenge and caused a deep structural change in the mobility of the multilayered dynamic framework of Smart Cities. The need to supply decision support systems to city authorities is higher than ever. Planning and managing mobility in Smart Cities has become more challenging, as the amount of information available and the pressure to enforce sustainable and secure policies increases, stakeholders require faster and more targeted actions.

Understanding and quantifying the past and current state of mobility is crucial for the tasks at hand, we propose the use of telecommunications data and analytics in this challenge, to solve the challenges proposed in order to collect deeper insights using the latest in descriptive, predictive, and prescriptive analysis.

Goals

To tackle 6 challenges:

- Descriptive Analysis of Cities
- A Normal Day in the mobility flows of Cities
- Infrastructure Planning
- Government Measures Impact on Mobility
- Model Risk Associated with variations in Mobility
- Impact of Covid19 in the mobility of cities

Challenges/Questions

C1: Descriptive Analysis of Cities.

Q1: How can we define metrics to describe and compare Mobility at the City level?

C2: A Normal Day in the mobility flows of Cities.

Q2: Who travels the City? A study of commuting in the City.

C3: Infrastructure Planning.

Q3: How can I improve the City's infrastructure through Mobility Data?

C4: Government Measures Impact on Mobility.

Q4: To what extent do government measures affect Mobility in Cities?

C5: Model Risk Associated with variations in Mobility.

Q5: Is there a correlation and can I model infection risk through Mobility Data?

C6: Impact of Covid19 in the mobility of cities.

Q6: To what extent did the Covid19 pandemic effectively change Mobility in the Cities?

Outcome

For each challenge answer the questions and identify a methodology or approach to solve the challenge using data provided and/or available.

The questions mentioned are guidelines and examples. We also encourage the formulation and answering different questions related to the challenge.

Data sources

The data sets for each challenge will be presented in depth prior the start of the challenge and comprises the following major topics:

- Mobility data for the Cities of Lisbon and Porto
- Infrastructure data of Lisbon and Porto
- Historical traffic data
- Covid19 pandemic cases data