RAPP

BikeHub Task Instructions

At RAPP, we are dedicated to helping businesses and their brands with technology and data. This challenge is framed as a business problem, in the same fashion as many of those that we must deal with during our regular business operations.

This task is based around "UrbanBike", a fictional bicycle rental company headquartered in Boston, USA.

UrbanBike would like to predict available bicycle capacity over the next 30–90 mins so they can make this data available to customers on their app. A key step in predicting capacity is to predict the duration of the bike trips from the time a bike is picked up from a docking station to the time it is returned to a docking station. To make these predictions, UrbanBike has given us data relating to their bike docking stations, historical trips, and weather data.

For this challenge, please use the attached data and this brief to carry out the following in Python:

- Perform data exploration
- Develop and evaluate a machine learning model to predict the duration of a trip
- Prepare a short presentation (15 mins max) outlining the modelling approach, results, and any further steps you would propose to the client

Once you have completed the challenge, please provide your code (Jupyter notebooks or equivalent are also fine) for review.

Please be prepared to present and answer questions (~5-10 mins) of your solution on the day.

Evaluation: This test is designed to assess you on four dimensions:

- Problem-solving skills
- Coding ability
- Technical knowledge of machine learning (and techniques)
- Communication