### **Tasks**

## **Part 1 - Experiment and Metrics Design**

### **Background**

The new version expands the purpose of the app beyond just driving. It includes additional information on earnings, and ratings, and provides a unified platform for Uber to communicate with its partners.

1. Propose and define the primary success metric for the redesigned app. Justify your choice.
2. Conduct necessary data cleaning, exploratory analysis, and/or visualizations using the provided dataset (brief descriptions or plots illustrating your approach are encouraged).
3. Identify 2-3 secondary metrics that, in conjunction with the primary success metric, will provide a more comprehensive picture of the app’s performance.
4. Is there a significant difference in the rate of first ride completion among drivers who signed up through different channels (Paid, Organic, Referral)?
5. Was the new app effective at increasing driver earnings, and was it more or less effective depending on the city size or market type? Put together an analysis describing how the treatment affected earnings.
6. Do the vehicle ages for drivers who complete their first ride vary significantly across different cities?
7. What demographic factors (e.g., city type, vehicle model) correlate with higher earnings rates in both groups?
8. Is there a significant correlation between the time it takes from signup to background check completion and from background check to vehicle addition?
9. Develop a robust plan to evaluate the effectiveness of the redesigned app in line with the metrics defined above. Discuss how you would reconcile the need for rapid results, maintaining statistical validity, and monitoring any potential risks.
10. Explain how you would interpret the results from your testing plan to make an informed decision about whether to fully implement the new design or revert to the previous version.

### **Instructions**

1. Use the provided data to understand which factors are most effective at predicting whether a signup will begin to drive. Based on these insights, suggest strategies to enhance Uber’s driver recruitment.
2. Include any code you developed for the analysis and ensure the dataset is deleted upon completion of the challenge.
3. Highlight any data-related assumptions or issues encountered during your analysis