

# Tencent Data Science Intern Take Home Challenge

**Position :** Tencent NA Publishing Data Scientist Intern

**Location:** Tencent America Palo Alto Office

## Declaration

The data set used for this take-home challenge is provided in the attached CSV file, named “**topline\_metrics.csv**.” The data does not reflect any real Tencent business or game metrics. It is a fake data set generated through functions to simulate a business context. You are welcome to try to map it to any business context or model to try to tell a story from the data. The take-home challenge is designed only for the hiring process of Tencent NA Publishing Data Science Team for Data Science Intern position. It does not represent any other Tencent Data Science Position’s recruiting process or take-home challenge.

## Instructions

Please use the attached dataset to accomplish as many as possible the following tasks to demonstrate your skills and experience of data science. You are welcome to use tools of your preference. However, we highly recommend that you use python/jupyter.

To guide you to demonstrate your skills in data science, we have created the following tasks to showcase your skills in data science. Please try to provide minimal of 2 deliveries of the recommended works:

1. A dashboard uses the attached dataset through [Dash](https://dash.plot.ly/?ga=2.48854882.553591290.1583622427-473402153.1579820962) package or other tools you prefer. The link to the open-source: <https://dash.plot.ly/?ga=2.48854882.553591290.1583622427-473402153.1579820962>
2. Use Anomaly Detection methodologies to detect anomaly from the attached data.
3. Clustering/prediction models based on the attached dataset.
4. Time Series Causation Graph Analysis from the attached dataset.
5. Your story and findings from the provided dataset.

## The Delivery Time

The candidate is required to finish the take-home challenge as best as one could, within four days from the time it sent out. Please be mindful of the time since this is also a significant factor for the rating. It is recommended that you make sure you have relatively enough time for you to start the take-home challenge. Please discuss your availability with our recurring team about this. You are welcome to postpone your start time and reschedule it if you are not fully ready.

## **The Deliveries and Ratings**

1. Source code. The code should be able to run through with no problem in the examiner's local environment.
2. A presentation to summarize your work. It will be used for your panel interview with the team later as well.
3. Source code, documentation needs to be in a private GitHub repository accessible with the recruiting team.
4. The ratings will be based on code readability, quality of work, presentation as a whole.
5. You agree to notify Tencent if any of the source code or technologies you use is controlled Export Administration Regulation for the exportation to China.
6. Tencent is not taking any IP rights in the source code, and will review it only for evaluation purposes.

## **Questions**

Please feel free to ask any question and reach out regarding the process of the hiring or the take home challenge.