**FWD Group**

**Group Data Science Team**

**Take-home Technical Test**

**Instructions:**

The test duration is **3 hours** and please submit your analysis output including any notebooks, slides, and code at the end of the test.

**Task:**

1. Explore and understand the dataset

2. Prepare a model or analysis and identify the factors that affect the customers’ willingness to renew the motor insurance. You may not need to use all the variables in the datasets

3. Based on your findings in 2, please make recommendations to formulate a business strategy that can improve the overall retention rate of customer

4. Suggest any additional data which would help your model/analysis

5. Please prepare **up to 5** slides to present your answers concisely

6. Any language, package, framework, or tools is allowed but the code must be readable, understandable, and reproducible

**Dataset Description:**

The attached dataset in csv format contains a simplified subset which contained customer demographic, vehicle information, policy information and customer’s willingness to renew their motor insurances.

Variables:

● id: Unique ID for the customer

● Gender: Gender

● Birth\_Year: Year of birth of the customer

● Driving\_Exp: Years of driving experience that the customer has

● Address\_Region: The region of Singapore based on customer address

● Insured\_Last\_Year: Was the customer insured with FWD last Year. 0: No, 1: Yes

● Vehicle\_Age: The age of vehicle

● Any\_Claim: Whether the customer made any claim during current policy

● Engine\_Capacity: Engine Capacity of the vehicle

● Sales\_Channel: The sales channel of the policy

● Willingness\_To\_Renew: Indicator of customer’s willingness to renew the policy. 1: Willing

0: Not Willing