

**Midterm Exam**  
**GITA317: Python Machine Learning II**  
정보통신대학원  
Oct. 20, 2022

**Notice:** Answer should be well structured and clear, easy to understand. Answers should be given in complete sentences.

Name: \_\_\_\_\_

Student Number: \_\_\_\_\_

**100 points total**

**Problem 1: 20 points**

We are interested in determining a good explanatory variable for a simple linear regression model. Describe a good way of determining it.

**Answer:**

**Problem 2: 30 points**

Describe how the decision tree regression works.

**Answer:**

**Problem 3: 20 points**

Describe how you can evaluate the results of the k-means clustering. In your answer, some measures may be used. If this is the case, you should explain the measure used clearly.

**Answer:**

**Problem 4: 30 points, Silhouette coefficient**

Describe the situation where the silhouette coefficient of an example is rather large.

**Answer:**