**AICEBERG** **Data Science Internship – Assessment 1**

You’ll need to work on the attached dataset. Please perform the following tasks and submit your solutions via email within 4 days of receiving this assignment. Include your well-commented Jupyter Notebook or Python script along with any necessary data files. Provide detailed explanations for each task and any additional insights you gathered during the analysis.

1. Handle missing values using simple and advanced imputation techniques and create two versions of the imputed dataset.
2. Perform data cleaning operations using appropriate techniques.
3. Train 3 different models on the 2 versions of the dataset.
4. Attempt to provide insights into what factors contribute most to the prediction using explainability/interpretability techniques of your choice.
5. Implement ensemble learning techniques and compare their performance with the previous models for both the versions of the dataset.
6. Deploy the trained model as a service and demonstrate how to make predictions using API requests.