**Team Members: Project Group 1**

* Emily Bowers, Matt Flanagan, Luis Martinez

**Project Description/Outline:**

To use machine learning for predicting in-hospital mortality among ICU-admitted Heart Failure (HF) patients using data downloaded from Kaggle (originally sourced from MIMIC-III database). Patients with a diagnosis of HF, who were ≥ 19 years old at the time of ICU admission were included in the study. Which variable(s) more strongly predict inpatient mortality among HF admitted patients.

**Information Obtained from Dataset:**

1. **Descriptive Data/Overview:**
   * Volume & Frequency of:
     + Age
     + Gender
     + Comorbidities
     + % survival/deaths
2. **Predicting Characteristics (Independent variables) of inpatient mortality**

**Dataset(s) to be Utilized:**

In Hospital Mortality Prediction Dataset, Admissions to ICU of the Beth Israel Deaconess Medical Center, Boston, MA June 1, 2001-October 31, 2012

(<https://www.kaggle.com/datasets/saurabhshahane/in-hospital-mortality-prediction/data>)

**Rough Breakdown of Tasks:**

* Download data from Kaggle - Matt
* Clean and organize the data, check for null data and duplicate data - Matt
  + Use Python to clean and format dataset
  + Inspect dataset in Pandas data frame
* Create a database in SQL – Postgres SQL - Luis
* Machine Learning – Matt, Luis, Emily
  + Create & run code using Python
* Tableau Dashboard – Matt, Luis, Emily
  + Descriptive Data analysis - Emily
* Create a write-up summarizing major findings and implications. – Emily
  + An overview of the project and its purpose
  + Instructions on how to use and interact with the project
  + References for the data source(s)
  + References for any code used that is not your own
* Presentation - All