

# Project 1: Milestone 1 Proposal and Data Selection

DSC 680

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- **Dataset Selection:** [https://www.kaggle.com/andrewmvd/heart-failure-clinical-data?select=heart failure clinical records dataset.csv](https://www.kaggle.com/andrewmvd/heart-failure-clinical-data?select=heart+failure+clinical+records+dataset.csv)
  
- **Domain:** List of 10 references that will assist me with my project and make sense of the data I am using.
  1. Heart Disease Facts | cdc.gov. (2020, September 8). Centers for Disease Control and Prevention. <https://www.cdc.gov/heartdisease/facts.htm>
  
  2. Stats of the States - Heart Disease Mortality. (2021). Cdc.Gov. [https://www.cdc.gov/nchs/pressroom/sosmap/heart\\_disease\\_mortality/heart\\_disease.htm](https://www.cdc.gov/nchs/pressroom/sosmap/heart_disease_mortality/heart_disease.htm)
  
  3. Heart Failure: Types, Symptoms, Causes & Treatments. (2021). Cleveland Clinic. <https://my.clevelandclinic.org/health/diseases/17069-heart-failure-understanding-heart-failure>
  
  4. Diabetes and Your Heart. (2021, May 7). Centers for Disease Control and Prevention. <https://www.cdc.gov/diabetes/library/features/diabetes-and-heart.html>
  
  5. Tidy, C. (2017, July 10). Hyperlipidaemia. Patient. <https://patient.info/heart-health/high-cholesterol/hyperlipidaemia#:~:text=Hyperlipidaemia%20means%20a%20high%20level%20of%20cholesterol%20or%20triglycerides%20in%20your%20blood.>
  
  6. Felman, A. (2019, July 22). Everything you need to know about hypertension. MedicalNewsToday. <https://www.medicalnewstoday.com/articles/150109>

7. Heart failure cases soar globally. (n.d.). ScienceDaily. Retrieved September 6, 2021, from <https://www.sciencedaily.com/releases/2021/02/210211195326.htm>
  8. Cover Story | One Size Does Not Fit All: The Role of Sex, Gender, Race and Ethnicity in Cardiovascular Medicine. (n.d.). American College of Cardiology. Retrieved September 6, 2021, from <https://www.acc.org/latest-in-cardiology/articles/2018/10/14/12/42/cover-story-one-size-does-not-fit-all-sex-gender-race-and-ethnicity-in-cardiovascular-medicine>
  9. Harvard Health. (2015, July 17). Race and ethnicity: Clues to your heart disease risk? <https://www.health.harvard.edu/heart-health/race-and-ethnicity-clues-to-your-heart-disease-risk>
  10. The Heart (Human Anatomy): Picture, Definition, Location in the Body, and Heart Problems. (2009, June 30). WebMD. <https://www.webmd.com/heart/picture-of-the-heart>
- **How I will analyze this dataset**
    - I want to use this dataset to discover the mortality rate from heart disease. Along with that I want to see how much of significant factor age is when it comes to heart disease. Lastly, I want to discover if men or women are more affected by heart disease; however, I want to see if race affects your mortality rate as well
    - Here are my research questions:
      - Are men or women at higher risk of dying from heart disease?
      - Will race be a key factor into mortality rate?
      - Which other diseases play a higher factor in mortality rate (ex. Hypertension or Diabetes)?
  - **Methods I am considering using for this project:**
    - Multiple Linear Regression
    - Regression Tree
    - Clustering
    - Neural Networks (May not have enough time)

- **Challenges that may occur during this project:**
  - Issue with Package within Python
    - Ex. Certain package or library I want to use is not accessible anymore.
  - Variables being the incorrect type.
  - Learning Curve
    - Ex. The method I want to use may be too difficult within time frame for project 1.
  - Adding in another dataset
    - Ex. Merging datasets
  - Work\Home Life Duties.