**Heart Failure Project**

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We started this project by identifying our dataset. Finding data that could be used readily for machine learning was key. After doing some research, we came upon the Heart Failure dataset and stuck with this one. Out of all the diseases and conditions in the world, heart failure leads in death totals annually. This condition continues to be a struggle for many, and now we can use our machine learning technology to help pinpoint correlations of cause and possibly suggest opportunities for physicians to monitor in the future.

With roughly 300 patients and about a dozen factors, we take the individuals and relate their data with the others. The first contributing factor is age. Our patients range from 40-95. Next, we have whether the patient has anemia. Anemic patients might experience weakness or shortness of breath from the lack of oxygen deployed through the blood. The third measure is the amount of creatinine phosphokinase (CPK) enzyme present in the blood. Abnormal rates would be below 20 or above 300 depending on the patient’s gender. Diabetes is taken into consideration and determined for each patient. Ejection fraction is the next factor and certainly an important aspect. Patients with less than 40% ejection from the left ventricle are considered at high risk for heart failure. Hypertension is considered and listed for each patient. Platelet counts ranging from 150,000-450,000 seem to be in a normal range. This count considers how well the blood can clot. The higher the count, the more clotting is observed.