Team: Shuyi Yu (1 member)
Email: Shuyiyu418@gmail.com
Country: USA
College/Company: Western Governors University
Specialization: Data Science
Deliverable: Week 9
Problem Understanding:

ABC Pharma Company, representation of what the rest of the industry also finds challenging, is experiencing a difficulty in understanding drug persistency, which refers to whether patients continue their prescribed treatments. This is critical for ensuring effective treatment outcomes and improving patient physical wellbeing. The company seeks to automate the identification process of patients at risk for non-persistence, bringing in real patient's data analytics to analyze patient demographics, comorbidities, risk factors, and treatment details to make informed decisions that support both physicians and patients.

Github Repo link: https://github.com/shuyi95/HealthcareDrugPersistancy

Final Recommendation:

Based on the deep analysis, key factors are identified that are influencing drug persistency, including the presence of comorbidities, long-term drug therapy, and Dexa administration during treatment. It is recommend using predictive modeling, particularly Logistic Regression, to identify high-risk patients early. At this initial stage of proposal of leveraging predictive analytics in solving the pharmaceutical issue, more investigations and experiments should be conducted before official deployment. Achieving a 80.1% accuracy in persistency prediction is a groundbreaking start at this point in pushing this project forward. By focusing on grouping patient engagement programs and physician collaboration, ABC Pharma can significantly improve drug adherence and optimize treatment outcomes. Regular updates to the model will ensure continued accuracy as new data becomes available.