

CKME136 – Abstract for Capstone Project

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As patient volume coming from different ethnic groups increases and encounter times become shorter, it is critical for clinicians to establish a working diagnosis in a timely manner. It is importance of using the patient history, ancestry, and physical as a basis for selecting relevant diagnostic testing, which leads to a timely and accurate diagnosis. People from certain ancestry are susceptible to certain genetic conditions that are not common among other ethnic groups. Also, people serving in the military are vulnerable to certain diseases than the people who do not. This process protects patients from the risks of unnecessary testing and is cost-effective.

The sample is using patient demographic containing standard information regarding individuals from a variety of ancestral lines.

The research focuses on data mining and knowledge discovery by extracting meaningful patterns from data, and using automated computational and statistical tools.

Techniques will include data cleaning of real-world dataset, apply different algorithms using R packages to identify and quantify factors that impact the diagnostic. Generate dashboards to gain insights into the most important aspects of the data.