

You are required to:

1. Describe the problem, related to the topic you selected.

A local hospital named Greg's Family Medical Center of Northern Texas noticed a five to ten percent increase in legitimate but time-sensitive deaths and related illnesses at its hospital and within their hospital system across the United States in the three previous years.

The hospital's leadership seeks the expertise of a Data Scientist with a Specialization in Artificial Intelligence or Predictive Analytics to help in the interpretation and development of a scalable Electronic Health Records (EHR) system. Medical staff members are tasked with making better time sensitive & data-driven decisions, improve patients' treatment, forecast diseases, and diagnose conditions.

Note: A Electronic Health Records (EHR) is a digital version of a patient's paper chart. EHRs are real-time, patient-centered records that make information available instantly and securely to authorized users.

1. Phrase the problem as a question to be answered using data.

Is it possible to leverage Artificial Intelligence or Predictive Analytics in an effort to interpret and develop a scalable Electronic Health Records (EHRs) system to aid the medical staff members in reducing the deaths and related illnesses at its hospital and within their hospital system across the United States in the three previous years?



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Briefly explain how you would complete each of the following stages for the problem that you described in the Business Understanding stage, so that you are ultimately able to answer the question that you came up with. (5 marks)

1. Analytic Approach
2. Data Requirements
3. Data Collection
4. Data Understanding and Preparation
5. Modeling and Evaluation

You can always refer to the labs as a reference with describing how you would complete each stage for your problem.

1. Analytic Approach

Predictive Models is ideal for a determining the probability of forecasting illnesses that could result in deaths at the hospital. The Electronic Health Records (EHRs) provides a medical "blueprint" of variables that are likely to influence future results.

Machine Learning could leverage an Electronic Health Records (EHRs) systems will zone-in on the relationships between reporting complications and potentially diagnosing the implications in advance.

1. Data Requirements

Engage medical staff members that are diagnosing death/related illnesses
Gather current Electronic Health Records (EHRs)
Request the previous three years (when the problem was first identified)

Mandate three additional years of Electronic Health Records (EHRs)
Secure the up-to-date reports of deaths and related illnesses
Order all non-related diagnoses (not linked to death or related illnesses)

1. Data Collection

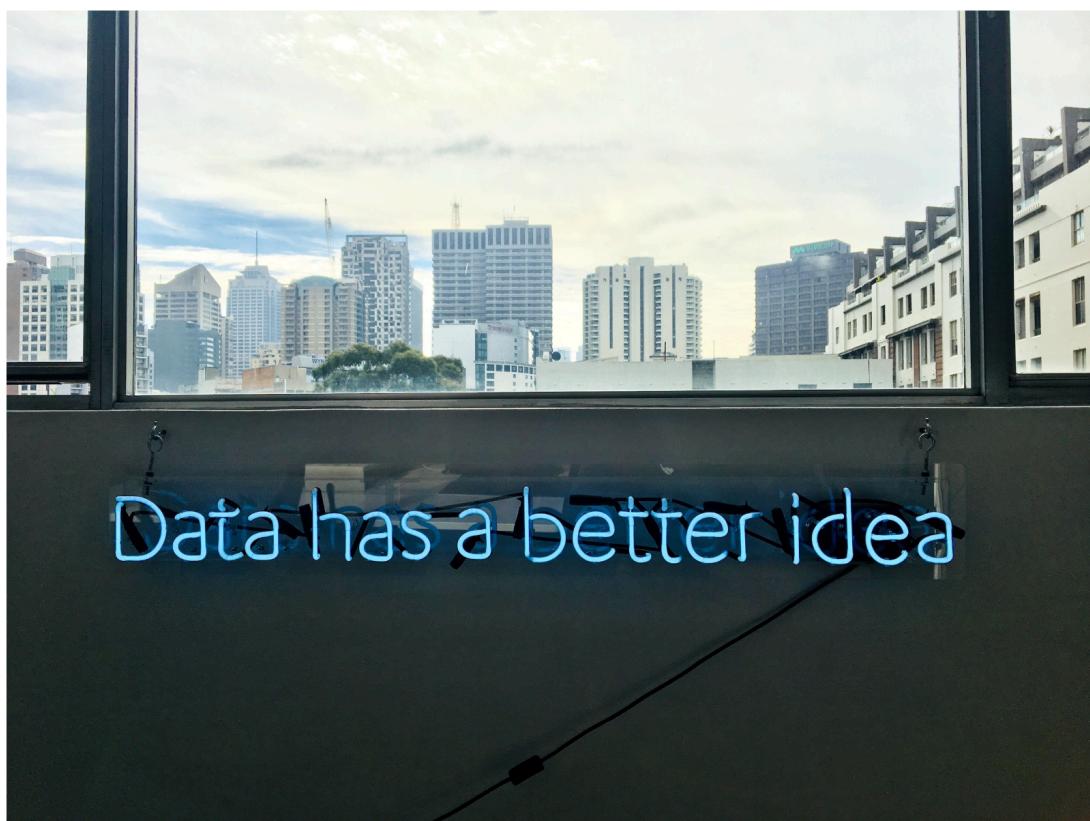
Capture Electronic Health Records (EHRs) Obtain current Personal Health Information PHI and HIPPA guidelines Secure the historical non-electronic records (Housed on and Off-Site)

1. Data Understanding and Preparation

Gain sign-off on Personal Health Info (PHI) storage location. Determine the mode of communication for Personal Health Info (PHI) Develop authorities, clearances, and restriction to sustain security measures.

1. Modeling and Evaluation

Develop a partnership with the Electronic Health Records (EHRs) administrators to ensure imported/exported data Ensure the data is checked by (SME) Subject Matter Experts for accuracy to remain inline with Predictive Analytics & Machine Learning systems Reaccess data before and after software changes and device updates and communicate changes thru a centralized database Re-engage stakeholders to gain-agreement on if the EHRs had improved time sensitive & data-driven decisions, improved patients' treatment, forecasted diseases, and diagnose condition per the business objectives



[Photo by Franki Chamaki on Unsplash](#)

Work Cited

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