HOSMARTAI
AI for the smart hospital of the future

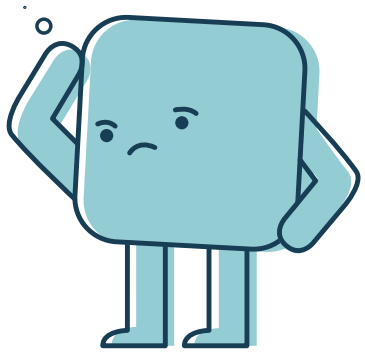
FACTSHEET

CCTA Tool

PILOT 1

Misdiagnosis or delayed diagnosis are two of the most common types of medical malpractice. They often result in patients not receiving proper and timely care, potentially followed by a serious deterioration of their health or even death.

PROBLEMS

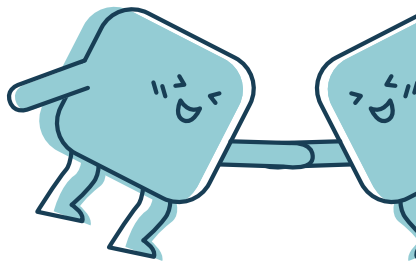


Patients taking a first scan usually require a second one with a contrast agent to determine if there is an actual problem. This practice has several constraints: the CTA scan suffers from under-resourced clinical facilities, inexperienced physicians and time constraints; CTA scans with contrast agents generate toxicity and may result in adverse events from the contrast agent, they entail unnecessary exposure to radiation and put a strain on hospital resources.

OBJECTIVES

The main objective of this intervention is to reduce unnecessary CCTAs by introducing a predictive model into the clinical assessment process for cases with suspected CAD.

THE SOLUTION



An AI-based application that will indicate whether each patient needs to undergo coronary computed tomography angiography (CCTA) due to suspected CAD, using a lab report along with calcium scoring in a tabular format. Using the data mentioned, we train ML based models that later provide a prediction on stenosis which then is taken as an indication of the need to undergo CCTA. The application includes an explainability technique to provide an explanation of the predictions. The solution is not a black box. The input of each solution is a comprehensive list of clinical variables and demographic information. The focus is on providing explainability through features that will allow to understand why the algorithm produces specific outcomes.

VALUE PROPOSITION

The solution will reduce unnecessary examinations by increasing the accuracy of the initial diagnosis.

MARKET

Healthcare: Cardiologists, Hospitals / clinics (public and private)

Industry: Producers of devices, SaaS for cardiology EMRs

BENEFICIARIES

Cardiologists

SOLUTION PROVIDERS

Main solution provider:

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