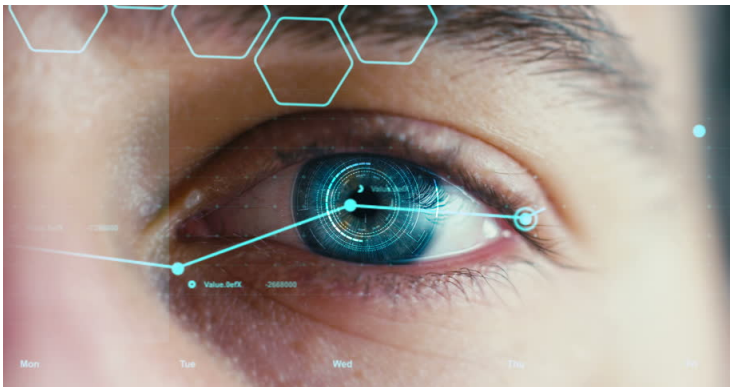# Google researchers use Eye scan to detect heart risk

20 February 2018 | News

The study can identify new indicators of heart disease risk present in pictures of retinas by analysing them with artificial intelligence

Eye scans using deep learning technique are all that one may soon need to gauge whether he or she is prone to heart ailments in near future, according to a study by scientists at Google Research, Verily Life Sciences and Stanford School of Medicine.

The researchers of the study, said that they would be able to identify new indicators of heart disease risk present in pictures of retinas by analysing them with artificial intelligence.

Traditionally, medical discoveries are often made through a sophisticated form of guess and test making hypotheses from observations and then designing and running experiments to test the hypotheses.

However, with medical images, observing and quantifying associations can be difficult because of the wide variety of features, patterns, colours, values and shapes that are present in real images.

Deep learning, can generate very accurate models without us having to tell the system what to look for.

For the study, the scientists developed deep learning models using retinal fundus images of nearly 3, 00,000 people available from two countries; the UK and the US and validated them using those from another 13,000 patients.

It brings down the prediction time-frame to 5 years as against 10 years typically associated with the clinical risk predictors currently in use.

The researchers however, cautioned that while the system achieved good results that matched the accuracy of a standard blood test-based technique for estimating the risk of heart failure commonly used in Europe called SCORE a dataset of less than 300,000 patients is still small for AI, and should be tested further.