



Aiding Effective Prognosis  
& Clinical Outcomes By  
Improving Accuracy Of  
Echocardiogram Interpretations



### Client Business Description

Eko.AI is a Denmark based Healthcare Intelligence firm committed to leveraging Machine Learning for automating assessment of medical images as a supplemental decision support tool for Clinicians. This will be used for early detection and effective treatment of heart disease

### Challenge

- ◇ Detecting Heart Ailments with predictable accuracy from DICOM images is dependent on human assessment which is a very subjective skill and depends purely on the abilities of the respective Doctor.
- ◇ Constant visual assessment of large number of images drains the minds and thus it is not possible to keep pace with volumes.

### Idea

- ◇ Create an automated solution that detects heart ailments and predicts diseases from the DICOM images with the help of Artificial Intelligence.
- ◇ Develop a DICOM image editor to help doctors effectively visualize DICOM images.
- ◇ Use a PACS server to retrieve large number of DICOM images and enable mass assessments.

### Our Solution

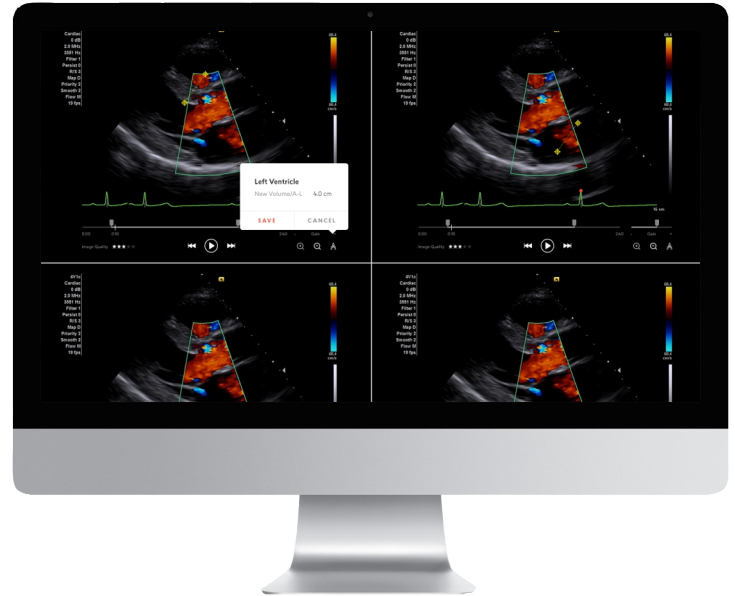
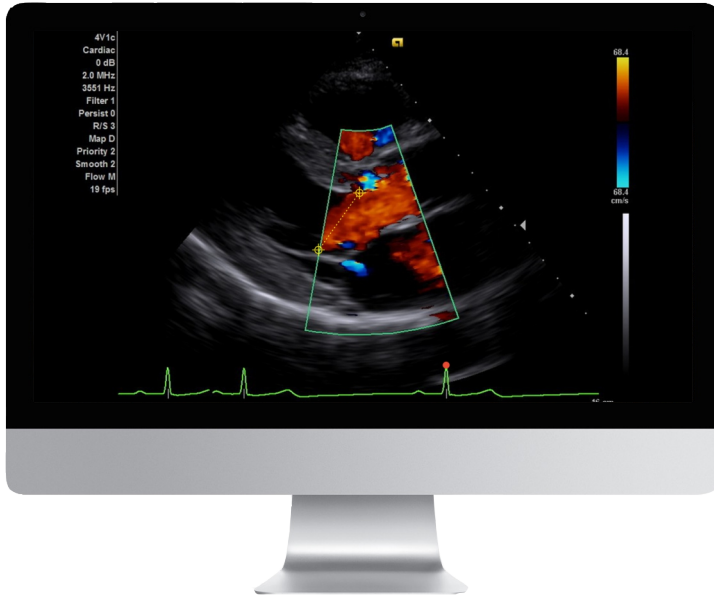
Mobile Pundits developed a standalone product called Eko.AI that was designed to handle large number of DICOM images. The WPF based cross platform application interfaced with abstracted AI Web Service Interfaces to detect the exact disease and help doctors to provide a viable treatment of heart disease. The software could run on Win 7 onwards, iPhone, Android, and AppleOS.

- ◇ Using WPF, we leveraged the capabilities of Java Script to enable this cross platform implementation and at the same time have native solution on respective platforms using WPF (To ensure compatibility with Win 7 versions and onwards), & Xamarin (for iOS/Android/MacOS).

- ◇ Eko.AI has features such as, DICOM image (echocardiogram) editor, interfacing with PACS server for volume handling, and protocols based reports.
- ◇ Each report has details in the form of Measurements of various areas identified in a particular DICOM view. These measurements are indicators of patient's health for the doctor.
- ◇ User is able to generate reports according to Protocols.
- ◇ Doctors can play with DICOM image to check the patients heart status. Eko.AI provided features like Zoom, Calipers, Line draw etc. All this is as part of single view DICOM editor only. Doctors get the precise and pinpointed information about the ailments.

## Technologies Used

- Visual Studio 2017
- WPF
- Angular 5.0.3
- JS DW Viewer (DICOM Image Editor)
- PACS Server Integration



## About Mobile Pundits

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