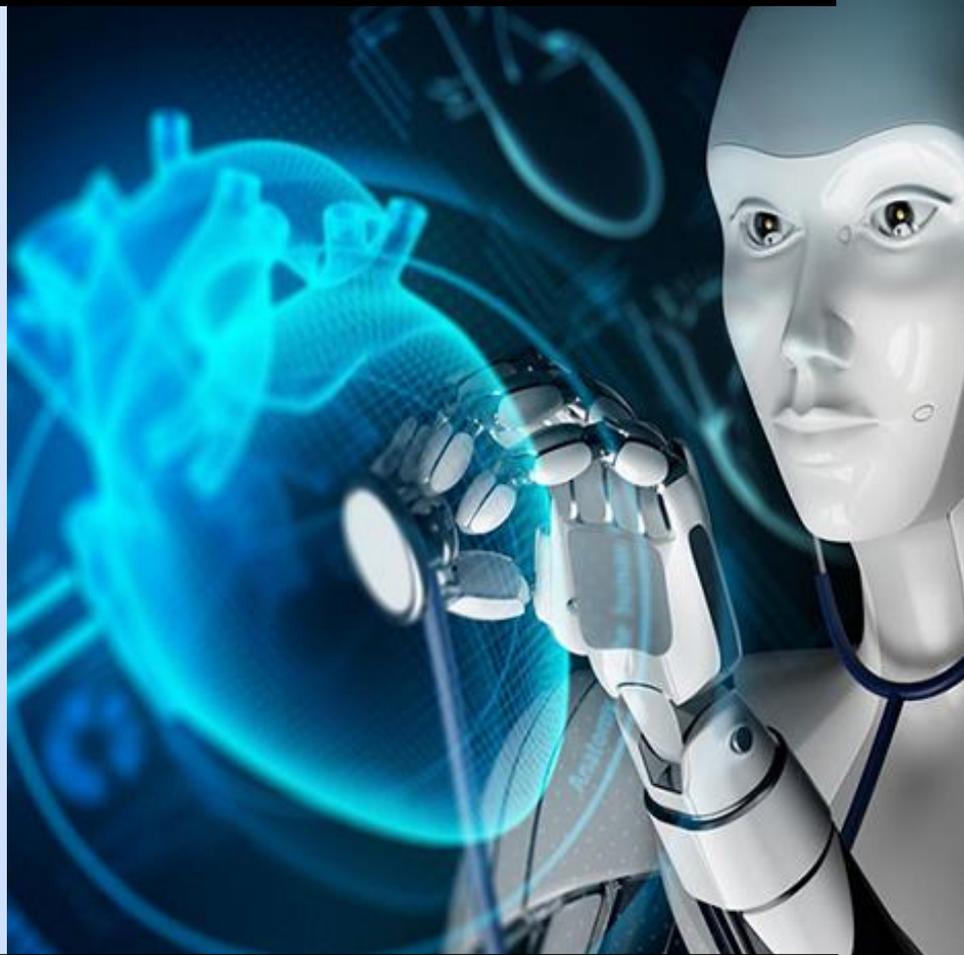

Supporting Medical Diagnostic Procedures



Background

Millions of patients are diagnosed with different medical conditions, annually around the world. In medical diagnostics, Artificial Intelligence has brought in breakthroughs in both invasive and non-invasive procedures. Today, medical practitioners can leverage technological support and lighten their burden, which requires them to write lengthy medical summaries and conduct personalized analysis of patient's cases.

The rise in cardiac diseases has posed a serious threat to the lives of millions. Each year the number of cardiac related conditions and strokes are surging. A high number of patients with cardiac issues today, fall in the 40 and less age group.

Case Study



For conducting various medical procedures and surgeries, computational modeling of aortic valves is required for machine learning algorithms to learn and help the AI applications predict the right operative process and treatment for the patient. For initiatives in this direction, the client wanted to tie up with a credible data labeling partner for 3D annotation of the aortic valve for reconstruction to research and plan surgical procedures, depending on their anatomic construction.

Challenges

- Cardiologists are burdened by the steps involved in examining and studying individual lab test reports and suggest further treatment. The time gap often poses a risk to the patient's life.
- The client required 3D annotated datasets of aortic valves to train machine learning models.

Solutions by Cogito

The client reached out to Cogito Tech LLC for labeling critical anatomy-specific 3D data of aortic valves to devise Artificial Intelligence based solutions for reconstruction of the same for research and treatment planning.

Having more than a decade of experience in data annotation and labeling in the field of medicare and equipped with HIPAA certification, Cogito offered below solutions to the client:

Case Study



- Aligned dedicated medical experts for providing training specific to the labeling process required.
- A team of experienced data annotators for the medical field was chosen and re-trained to carry out the labeling.
- A test dataset was prepared at each stage for verification of the correct labeling of the data.
- Three-level data quality assurance was performed on labeled data.

Outcomes

The 3D training datasets for carrying crucial computational modeling of aortic valves of patients were labeled with ease and under thorough supervision. The client was successfully able to perform data verification and incorporated the same at their end to equip the Artificial Intelligence application.

Case Study



900+

Man Hours
Invested

>2000

Tasks
Delivered

99%

Accuracy

3

Level Quality
Check

About Cogito

Cogito is a hybrid data labeling platform following model-assisted labeling (MAL) approach to cater industry's leading businesses. The MAL model leverages a human workforce to label a relevant portion of the training dataset which enables training of the AI application. Playing an important part as human-in-the-loop, our solutions encompass business verticals ranging from Retail, Manufacturing, Building, and Construction, to Medical, Food Processing, E-Commerce, and more.