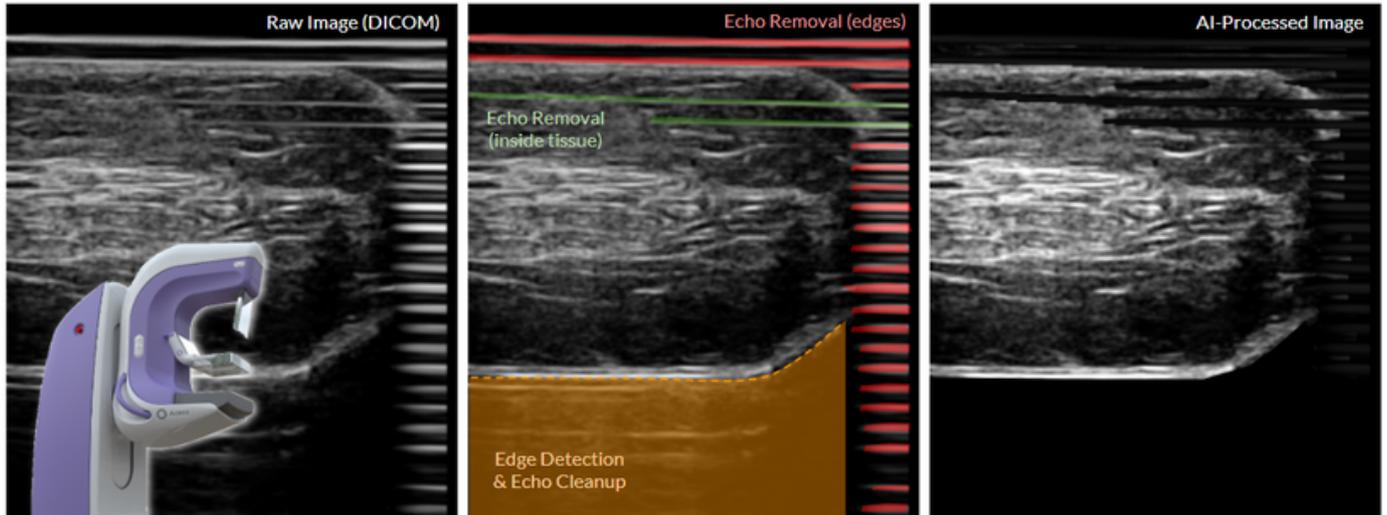


Medical Image Segmentation

Case Study: CapeRay



FIRSTSTEP.AI APPLICATIONS

- FirstStep.ai Designer
- Object Segmentation
- Cloud & EDGE
- DICOM Extractor

“
The results provided by the FirstStep.ai Designer are simply stunning, two orders of magnitude better than manual editing.

The savings in time are huge!

”

Dr. Kit Vaughan (CEO)



Automatic image filtering

Problem Statement:

CapeRay's novel engineering design combines the best of low-dose full-field digital mammography (FFDM) and 3D automated breast ultrasound (ABUS) into a single device called Aceso. However, images captured by Aceso contain a lot of unwanted noise, echoes and reflections.

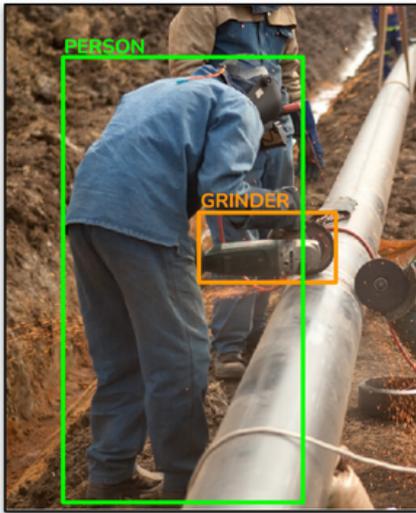
Pain Points:

Aceso images needed to be cleaned up, and CapeRay wanted to bundle automated image filtering into their standard product offering. Previous rule-based algorithms developed were not very robust, and manual cleanup efforts are tedious and time consuming.

FirstStep.ai Solution:

The FirstStep.ai Object Segmentation AI models:

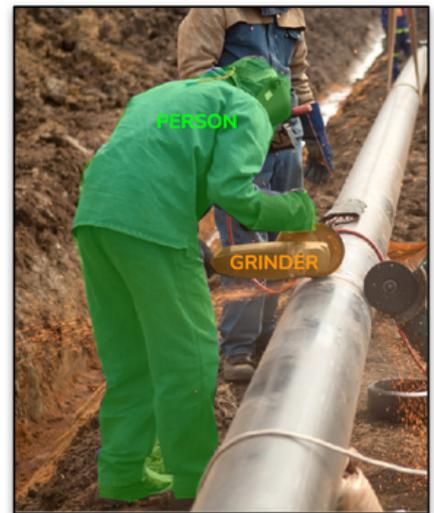
- Can be trained on client-specific datasets
- Can integrate with client's existing software products
- Eliminate human error
- Offer a scalable solution for product vendors like CapeRay



▶ FirstStep.ai Object Detection



▶ FirstStep.ai Pose Estimation



▶ FirstStep.ai Object Segmentation

Further Information on Industrial Applications

Manufacturing Applications include:

- Product Quality Assurance
- Packaging Inspector (label and barcode)
- Batch / Order Management

Industrial Environment Application Include:

- PPE Screening (controlled entry into hazardous areas)
- Man Machine Separation (vehicles or hazardous equipment)
- Collision Detection and Early Warning (loading or distribution areas)
- Visual Alarm Triggers (waving, person falling down)
- IR Camera Analysis (unexpected heat signatures)
- Real-time mobile inspection rounds (in field equipment identification)

Example Applications of AI in industry:

Object Segmentation → Real-time Tilt Analysis



Product Inspection



“ There is absolutely no doubt that AI will play a crucial role in the future products developed by CapeRay.

AI can enhance our ability to detect breast cancer early, thus making a significant contribution to the health of women worldwide.

”

Dr. Kit Vaughan (CEO)

CapeRay