How AI And Deep Learning Are Now Used To Diagnose Cancer

By Ania Berazaluce & David Montllor

Introduction

How can AI (special attention on Deep Learning) help Healthcare

- Assist with monotonous jobs
- Design best suited treatment plans for every patient
- Early diagnose of killer illnesses

Introduction

Short introduction to image recognition

Image recognition is the ability of software to identify objects, places, people, writing and actions in images.

- Visual genome
- Google's vision

Job Description

Projects which have developed a software that detect diseases from chest X-rays

- Name: Infervision
- Researchers: Chen Kuan and his team
- Used in: Szechwan People's Hospital, China
- How does it work

Job Description

Projects which have developed a software that detect diseases from chest X-rays

- Researchers: Researchers from the National Institutes of Health in Bethesda, Maryland
- How does it work

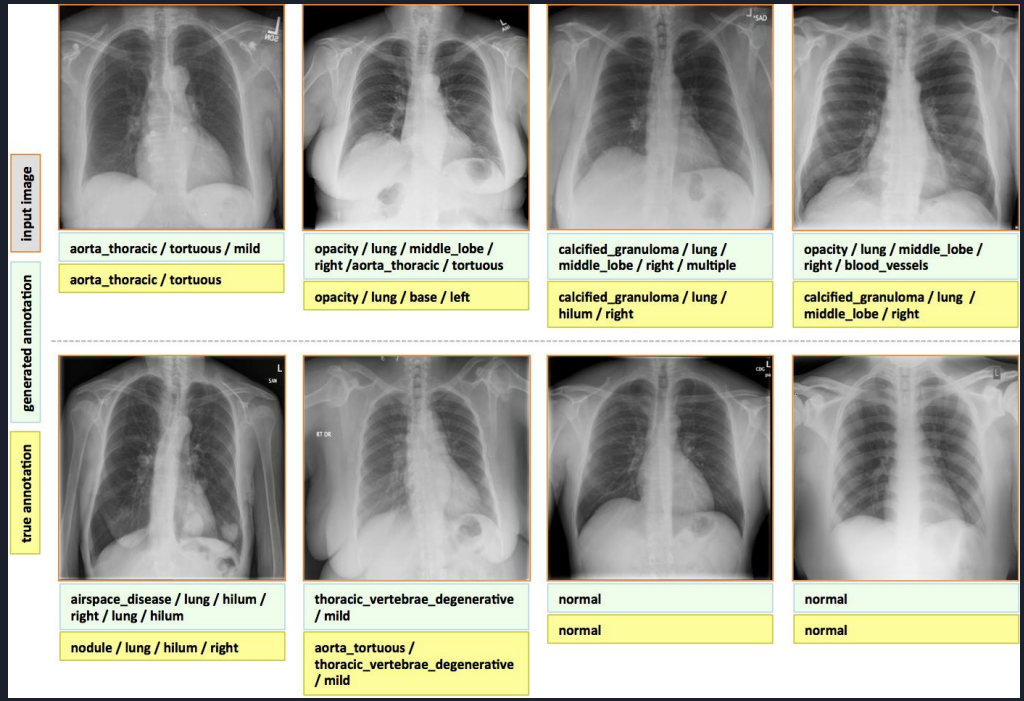
Job Description

Projects which have developed a software that detect diseases from chest X-rays

- Name: Enlitic
- Researchers: Jeremy Howard's company, Enlitic
- Used in: Capitol Health Limited, a radiology clinic with locations across Australia
- How does it work

Description of results

- Further training and higher prediction rates
- Search electronic records for all X-rays with a particular disease.
- Not only used for cancer diagnosis



Description of results

Infervision

- Augmented CT Screening Solution
- Augmented X-ray Screening Solution
- Deep Learning Research Platform AI—Scholar

Description of results

Enlitic

- Can incorporate a wide range of unstructured medical data → higher accuracy and deeper insights
- Smooth integration with infrastructure
- Can interpret a medical image up to 10,000 times faster than the average radiologist

Comparison with other systems

- Mainly used in countries with a shortage of qualified doctors
- Faster and more efficient than radiologists
- Also used in the diagnosis of diseases in other body parts

Discussion or reflections regarding the work presented

- Is this technology appropriate?
- Where is it actually used?

Final conclusions

These systems could even help countries with limited clinical resources screen large numbers of patients for diseases.