

Controls

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Viewport

Brightness Contrast

AI Logic

Retrieval Count Global Threshold Use per-class thresholds RUN ANALYSIS

ID: PHOTO_2025-12-12_18-02-11 DOB: N/A SEX: Unknown MODALITY: Uploaded image



AI DIAGNOSIS (MULTI-LABEL)

Cardiomegaly, Pneumonia, Pneumothorax

Mean predicted probability (selected labels) — calibrated: 12.19%
Max similarity to chest database: 87.49%

 View class probabilities (calibrated)

label	probability
7 Normal	0.5098
1 Pneumonia	0.2628
2 Atelectasis	0.082
4 PleuralEffusion	0.0779
6 Pneumothorax	0.0523
0 Cardiomegaly	0.0506
3 Edema	0.0327
5 Fracture	0.027

Calibrated probabilities (sigmoid / Platt scaling) on a held-out set. Still not a clinical device.

KG: removed 'Normal' because other pathologies exist.

 Knowledge Graph Facts (KG)

Cardiomegaly

Locations: ['Heart']

Enlargement of the cardiac silhouette, suggestive of heart failure or cardiomyopathy.

Pneumonia

Locations: ['LeftLung', 'RightLung']

Inflammation of the lung parenchyma/alveoli, often caused by infection.

Pneumothorax

Locations: ['PleuralSpace']

Presence of air in the pleural space causing lung collapse.

Evidence Retrieval (Similar Cases)

 Match #1 Match #2 Match #3

Diagnosed Pathology: Atelectasis Pneumonia PleuralEffusion Pneumothorax

Label overlap with prediction: Pneumonia, Pneumothorax

 View Radiologist Report

There is XXXX increased **opacity** within the right upper lobe with possible mass and associated area of **atelectasis** or focal **consolidation**. The cardiac **silhouette** is within normal limits. XXXX **opacity** in the left **midlung** overlying the posterior left 5th rib may represent focal **airspace** disease. No **pleural effusion** or **pneumothorax**. No acute bone abnormality. 1. Increased **opacity** in the right upper lobe with XXXX associated **atelectasis** may represent focal **consolidation** or mass lesion with **atelectasis**. Recommend chest CT for further evaluation. 2. XXXX **opacity** overlying the left 5th rib may represent focal **airspace** disease.

Similarity: 87.49%

 Generate Final Report Draft (LLM)

LLM draft was automatically revised to satisfy KG constraints.

 Verifier warnings

Missing location hint for Cardiomegaly (expected one of ['Heart']) | sentence: 'Cardiomegaly is present'

Missing location hint for Pneumonia (expected one of ['LeftLung', 'RightLung']) | sentence: 'The lungs show opacity consistent with pneumonia'

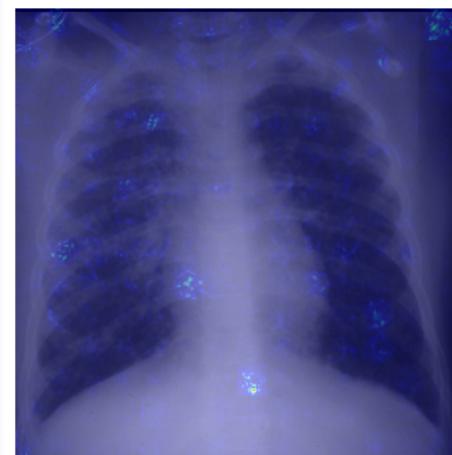
Missing location hint for Pneumothorax (expected one of ['PleuralSpace']) | sentence: 'Pneumothorax is present'

Missing location hint for Normal (expected one of ['Chest']) | sentence: 'Bones appear normal'

Missing location hint for Cardiomegaly (expected one of ['Heart']) | sentence: '- Cardiomegaly'

Missing location hint for Pneumonia (expected one of ['LeftLung', 'RightLung']) | sentence: '- Pneumonia'

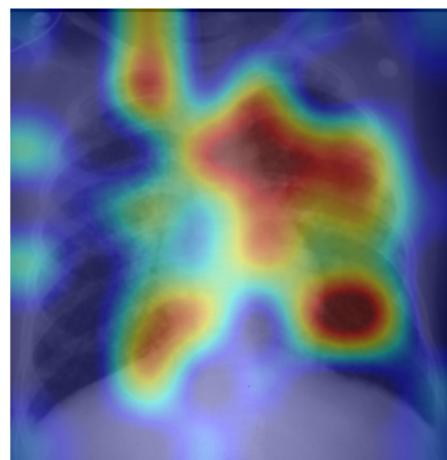
Missing location hint for Pneumothorax (expected one of ['PleuralSpace']) | sentence: '- Pneumothorax'

 Revision trail (draft → final) Show disease-specific occlusion heatmap (slow)

Explainability target label

Cardiomegaly

Occlusion grid (higher = slower)

 Compute label-specific explanation

Occlusion sensitivity for Cardiomegaly (grid=8). Bright regions mean masking that area reduced the label probability the most.

Version 1

FINDINGS:

Cardiac silhouette is enlarged, consistent with cardiomegaly.

Lungs show opacity, suggestive of pneumonia.

Pleura: No pleural effusion identified.

Bones: No fractures apparent.

Lungs also show collapse due to pneumothorax.

IMPRESSION:

- Cardiomegaly present.
- Pneumonia likely.
- Pneumothorax present.

Version 2

FINDINGS:

- Cardiac silhouette is enlarged.
- Lungs show opacity consistent with pneumonia.
- No pleural effusion or pneumothorax.
- No fractures.

IMPRESSION:

- Cardiomegaly.
- Pneumonia.
- No pneumothorax.

Version 3

FINDINGS:

Cardiomegaly is present. The lungs show opacity consistent with pneumonia. Pneumothorax is present. The pleura are otherwise clear. Bones appear normal.

IMPRESSION:

- Cardiomegaly
- Pneumonia
- Pneumothorax

AI Copilot Report

FINDINGS:

Cardiomegaly is present. The lungs show opacity consistent with pneumonia. Pneumothorax is present. The pleura are otherwise clear. Bones appear normal.

IMPRESSION:

- Cardiomegaly
- Pneumonia
- Pneumothorax

NOTE: This draft is generated by a local LLM (DeepSeek-R1 via Neuro-Symbolic pipeline) and must be reviewed by a certified radiologist.