

Pneumothorax Localizer ("PL")

What's new: Engineered on the basis of deep neural networks, Topazium implemented a platform which unsupervisely examines patient's chest X-rays, detecting and localizing the potential presence of pneumothorax. Our system is capable of surpassing the diagnostic performance observed on primary-care centers, allowing prioritization of highlighted images for urgent follow-on review by specialized physicians.

Key insights: PL takes patient's chest X-rays as input and returns the potential pneumothorax localization, if/when suspected to be evident.



segmentation to identify the pneumothorax-likely regions.

Pneumothorax localized in the red region

Results: PL is able to detect the vast majority of images with evidential pneumothorax, whilst correctly categorizing images those deemed as "negative".

Why it matters: Pneumothorax can precipitate life-threatening emergencies due to lung collapsing and, respiratory and/or circulatory distress. Topazium's framework can be used to perform an emergency triage for priority interpretation and/or provides a further radiological orientation for non-radiologist professionals. This results in faster treatment times, significantly reducing therapeutic traumas and fatalities.

