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(31) Priority Document No	:NA	(72) Name of Inventor :
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(57) Abstract :

The invention relates to a computer-based model (100) for the early detection of lung diseases using imaging data, patient history, and clinical records. The system comprises a data acquisition module (110), image preprocessing unit (120), feature extraction unit (130), classification engine (140), risk assessment unit (150), and decision support interface (160). By integrating artificial intelligence and predictive analytics, the invention ensures accurate identification of early lung abnormalities, reduces diagnostic errors, and provides timely clinical insights. The model continuously learns from new data, improving adaptability across populations and imaging modalities.

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