Lung US Dataset

A
Healthy — 20 videos + 5 images
Pneumonia — 23 videos + 7 images
COVID-19 — 40 videos + 16 images

B **Frame-based classification**

conv-2D+ReLU — 64 64 24
conv-2D+ReLU — 128 128 12
conv-2D+ReLU — 256 256 256 56
conv-2D+ReLU — 512 512 512 28
conv-2D+ReLU — 512 512 512 14
dense+ReLU+batchnorm — 1 4
dense+softmax — 1 4

C **Video-based classification**

3D-Conv+BN — 32 64 64
3D-Conv+BN — 64 128 32
3D-Conv+BN — 128 256 16
3D-Conv+BN — 256 512 8
dense+ReLU — 1 1024
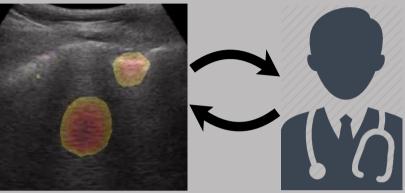dense+softmax — 1 3
3D Conv block

Explainability analysis

D **Class activation maps**
Pathological pattern highlighting
Human-in-the-loop validation

E **Confidence estimates**
Epistemic uncertainty
MC Dropout
Aleatoric uncertainty
Test time augmentation