

6 Supplementary material

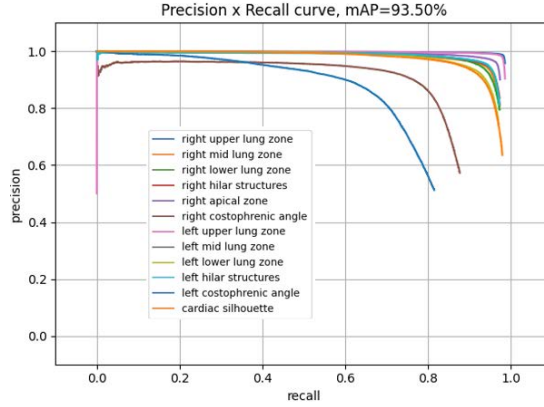


Fig. 4: Precision-Recall curves for backbone representation learning module. Plot created using [\[12\]](#)

Table 5: Anatomical regions characteristics for representation learning model using DETR

| Progression Label | Train | Val | Test | Total |
|--------------------------|-----------|---------|---------|-----------|
| Right Upper Lung Zone | 166,259 | 23,918 | 47,341 | 237,518 |
| Right Mid Lung Zone | 162,889 | 23,400 | 46,422 | 232,711 |
| Right Lower Lung Zone | 162,983 | 23,414 | 46,446 | 232,843 |
| Right Costophrenic Angle | 166,137 | 23,900 | 47,297 | 237,334 |
| Right Hilar Structures | 162,883 | 23,399 | 46,419 | 232,701 |
| Right Apical Zone | 162,836 | 23,380 | 46,414 | 232,630 |
| Left Upper Lung Zone | 166,226 | 23,910 | 47,313 | 237,449 |
| Left Mid Lung Zone | 162,146 | 23,294 | 46,240 | 231,680 |
| Left Lower Lung Zone | 162,582 | 23,372 | 46,377 | 232,331 |
| Left Costophrenic Angle | 165,875 | 23,873 | 47,233 | 236,981 |
| Left Hilar Structures | 162,170 | 23,299 | 46,233 | 231,702 |
| Cardiac Silhouette | 166,490 | 23,949 | 47,387 | 237,826 |
| Total | 1,969,476 | 283,108 | 561,122 | 2,813,706 |

Table 6: Dataset characteristics for disease classification labels per anatomical regions at: right upper lung zone (RULZ), right mid lung zone (RMLZ), right lower lung zone (RLLZ), right costophrenic angle (RCA), right hilar structures (RHS), right apical zone (RAZ), left upper lung zone (LULZ), left mid lung zone (LMLZ), left lower lung zone (LLLZ), left costophrenic angle (LCA), left hilar structures (LHS), cardiac silhouette (CS)

| Finding Label | RULZ | RMLZ | RLLZ | RCA | RHS | RAZ |
|------------------------------|--------|--------|--------|--------|--------|-------|
| Lung Opacity | 10,922 | 25,132 | 70,428 | 57,163 | 59,432 | 6,196 |
| Pleural Effusion | 663 | 3,697 | 15,788 | 56,107 | 0 | 0 |
| Atelectasis | 1,739 | 9,751 | 43,299 | 2,162 | 2,472 | 0 |
| Enlarged Cardiac Silhouette | 0 | 0 | 0 | 0 | 0 | 0 |
| Hazy Opacity/Pulmonary Edema | 1,479 | 2,404 | 6,807 | 1,685 | 35,350 | 0 |
| Pneumothorax | 115 | 197 | 1105 | 834 | 0 | 4603 |
| Consolidation | 1420 | 4192 | 7954 | 499 | 1301 | 0 |
| Heart Failure/Fluid Overload | 588 | 189 | 631 | 202 | 1249 | 0 |
| Pneumonia | 1940 | 6493 | 13647 | 0 | 2960 | 219 |

| Finding Label | LULZ | LMLZ | LLLZ | LCA | LHS | CS |
|------------------------------|-------|--------|--------|--------|--------|--------|
| Lung Opacity | 8,177 | 26,130 | 80,840 | 59,380 | 58,360 | 0 |
| Pleural Effusion | 526 | 5,066 | 18,933 | 18,166 | 0 | 0 |
| Atelectasis | 1,155 | 13,434 | 55,872 | 2,616 | 2,043 | 0 |
| Enlarged Cardiac Silhouette | 0 | 0 | 0 | 0 | 0 | 58,908 |
| Hazy Opacity/Pulmonary Edema | 1,479 | 2,391 | 6,805 | 1,673 | 35,196 | 0 |
| Pneumothorax | 77 | 125 | 729 | 594 | 0 | 0 |
| Consolidation | 900 | 4,382 | 9,045 | 518 | 1,014 | 0 |
| Heart Failure/Fluid Overload | 587 | 187 | 633 | 201 | 1,241 | 6,636 |
| Pneumonia | 1,074 | 5,862 | 13,907 | 0 | 2,270 | 0 |

Table 7: # Images (number of images) and # Bboxes (number of bounding boxes) utilized in order to generate the dataset for localized disease classification task

| Finding Label | # Images | # Bboxes |
|------------------------------|----------|----------|
| Lung Opacity | 102,675 | 323,175 |
| Pleural Effusion | 51,328 | 111,267 |
| Atelectasis | 49,507 | 94,280 |
| Enlarged Cardiac Silhouette | 41,195 | 41,195 |
| Hazy Opacity/Pulmonary Edema | 24,958 | 66,558 |
| Pneumothorax | 4,448 | 5,904 |
| Consolidation | 10,470 | 21,887 |
| Heart Failure/Fluid Overload | 4,694 | 8,723 |
| Pneumonia | 17,142 | 33,844 |