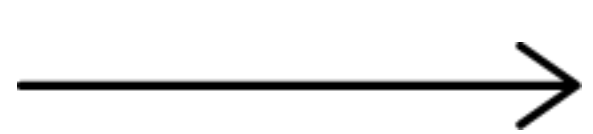


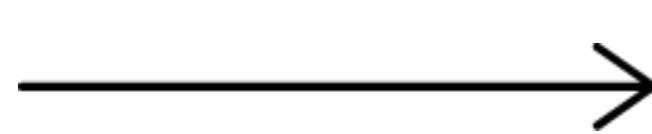
Video: Multi task

Binary:

Image



Algorithm



Mass or No Mass

3 Key Challenges (medical image?)

Class Imbalance

Multi-task

Dataset Site

★
Solution

Weighted Loss
/ Resampling

Multi-label
Loss

Transfer Learning
+ Data Augmentation

Multi-Task:

Image



Algorithm



Mass or No Mass

Pneumonia or No

Edema or No

Examples (mass, pneumonia, edema)

Predicted Probabilities

P_1 0, 1, 0

0.3, 0.1, 0.8

P_2 0, 0, 1

0.1, 0.1, 0.8

P_3 0, 1, 1

0.2, 0.2, 0.7

P_4 1, 0, 1

0.6, 0.3, 0.8

P_5 1, 1, 1

0.7, 0.7, 0.9

P_6 1, 0, 0

0.8, 0.1, 0.2

P_7 0, 1, 1

0.3, 0.9, 0.8

P_8 0, 0, 0

0.1, 0.1, 0.2

$L(x, y)$