Advanced Machine Learning (CSL7530)
Instructor – Dr. Mayank Vatsa

"SuperLoss: A Generic Loss for Robust Curriculum Learning"

Satyam Kumar Gupta
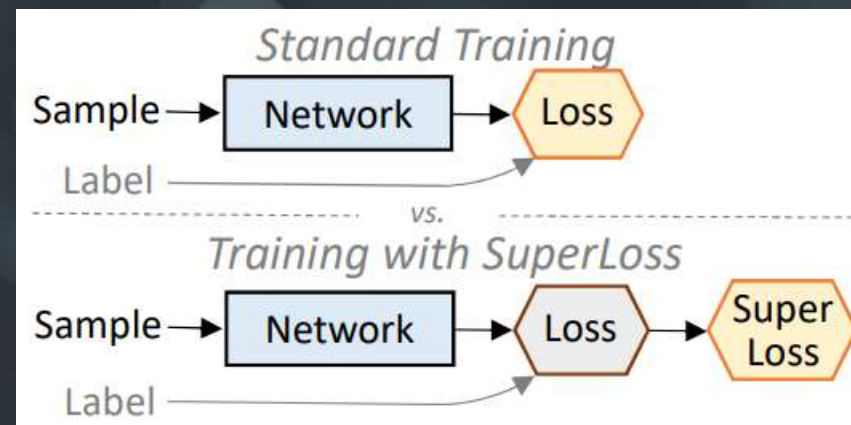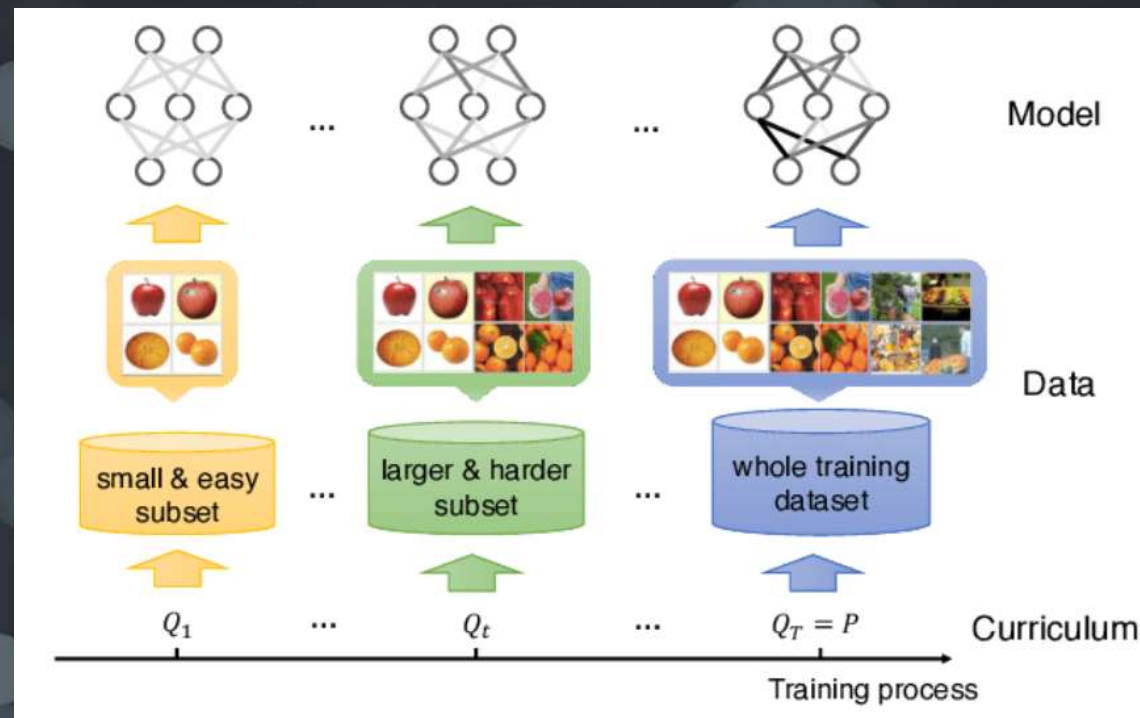### B20ME068

Curriculum Learning

Super Loss

___Advantages of SuperLoss

Confidence-aware loss

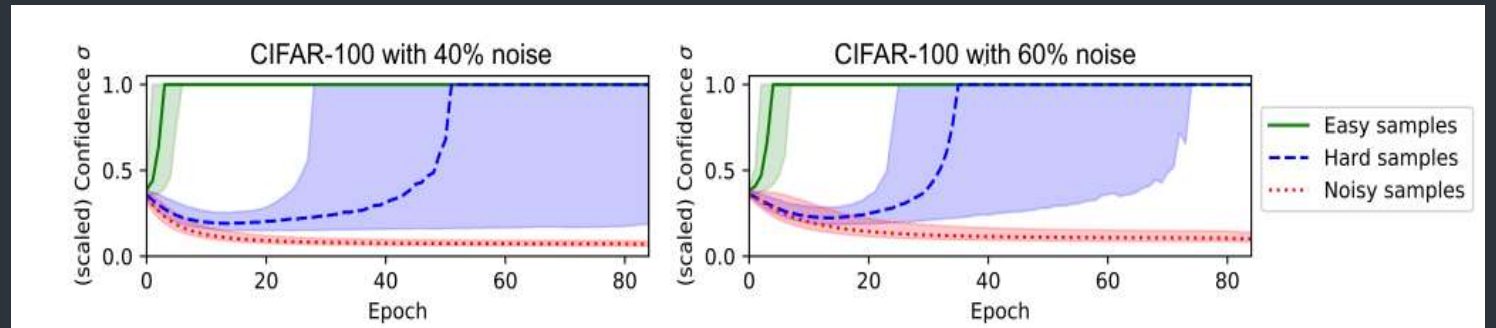$$\ell(f(\boldsymbol{x}_i), y_i) \implies \ell(f(\boldsymbol{x}_i), y_i, \sigma_i)$$

Optimal confidence and SuperLoss

$$\sigma_\lambda^*(\ell_i) = \arg \min_{\sigma_i} L_\lambda(\ell_i, \sigma_i).$$

$$SL_\lambda(\ell_i) = L_\lambda(\ell_i, \sigma_\lambda^*(\ell_i)) = \min_{\sigma_i} L_\lambda(\ell_i, \sigma_i)$$
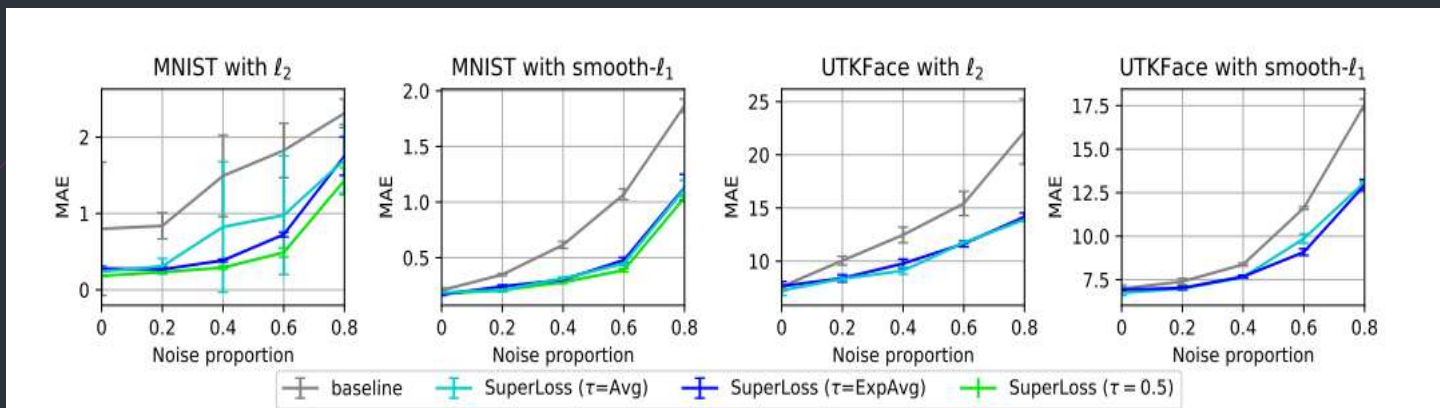
Applications and Experimental section

1. **Classification**

2. **Object detection**

3. **Image retrieval**

4. Regression

<u>Limitations and it's improvement</u>

Thank you