

SIGN-LANGUAGE

Spring 2026

Meeting No.3

System Development
& Datasets

Results with no fine-tuning

SlowFast (Pretrained on Kinetic-400):

WLASL100: 7.8%

WLASL300: 1.5%

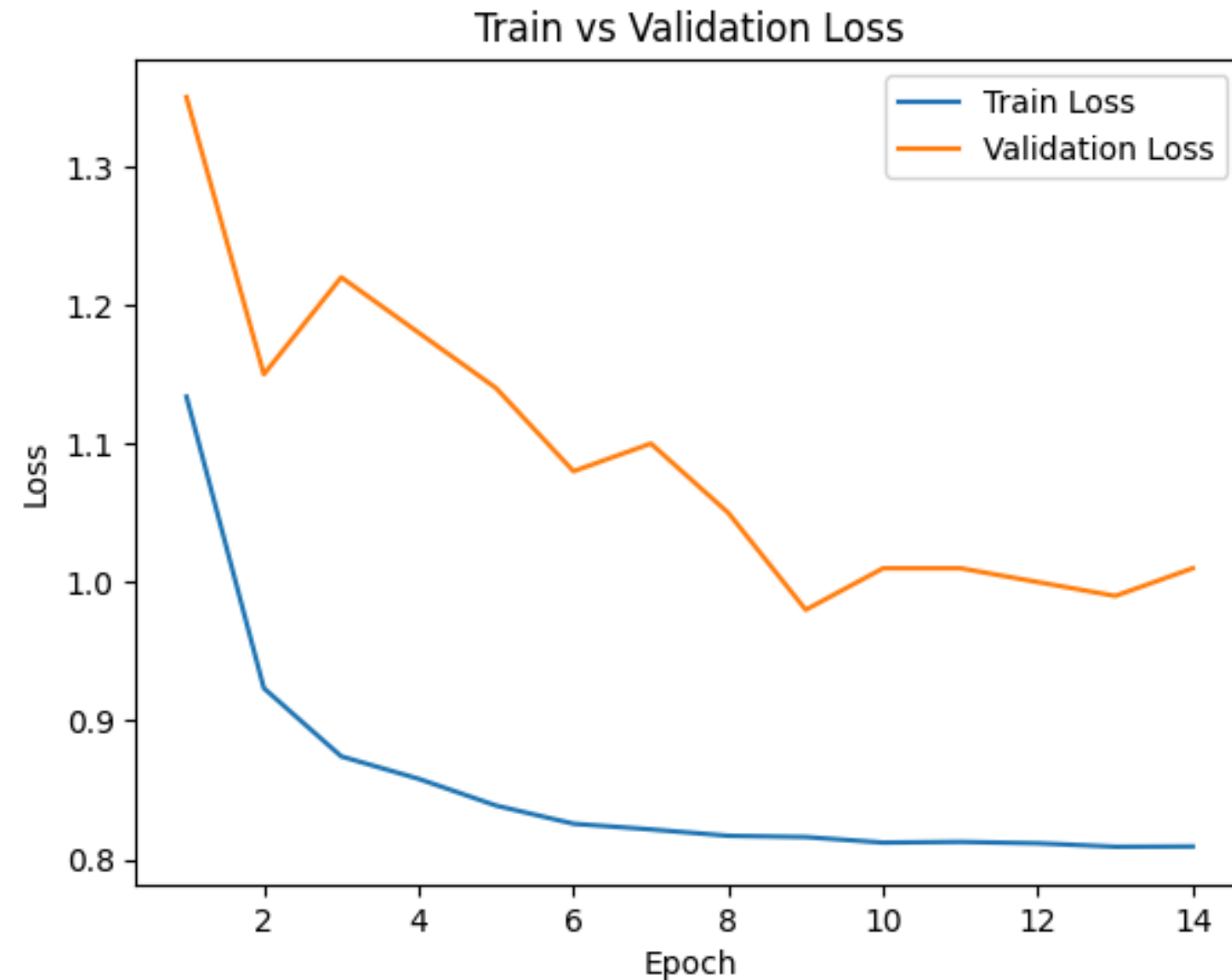
ViViT (Pretrained on WLASL100):

WLASL100: 27.5%

WLASL300: 0.2%

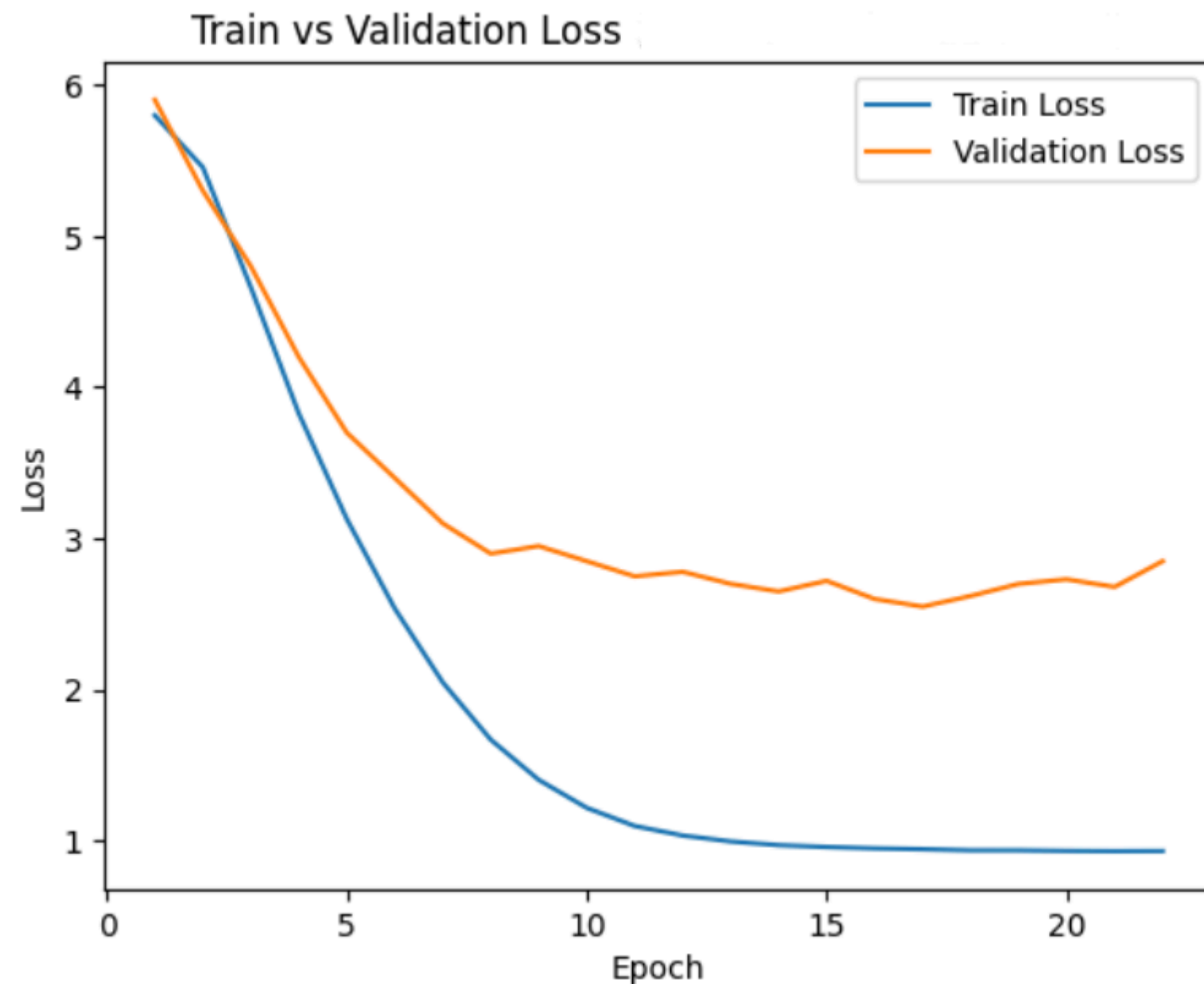
FULL FINE-TUNING VIVIT FOR WLASL-100

Pre-trained on: WLASL-100
Early Stopping implemented
Epochs: 30 (stopped at 14)
Training time: 9820s
Per-epoch training time: 701.4s



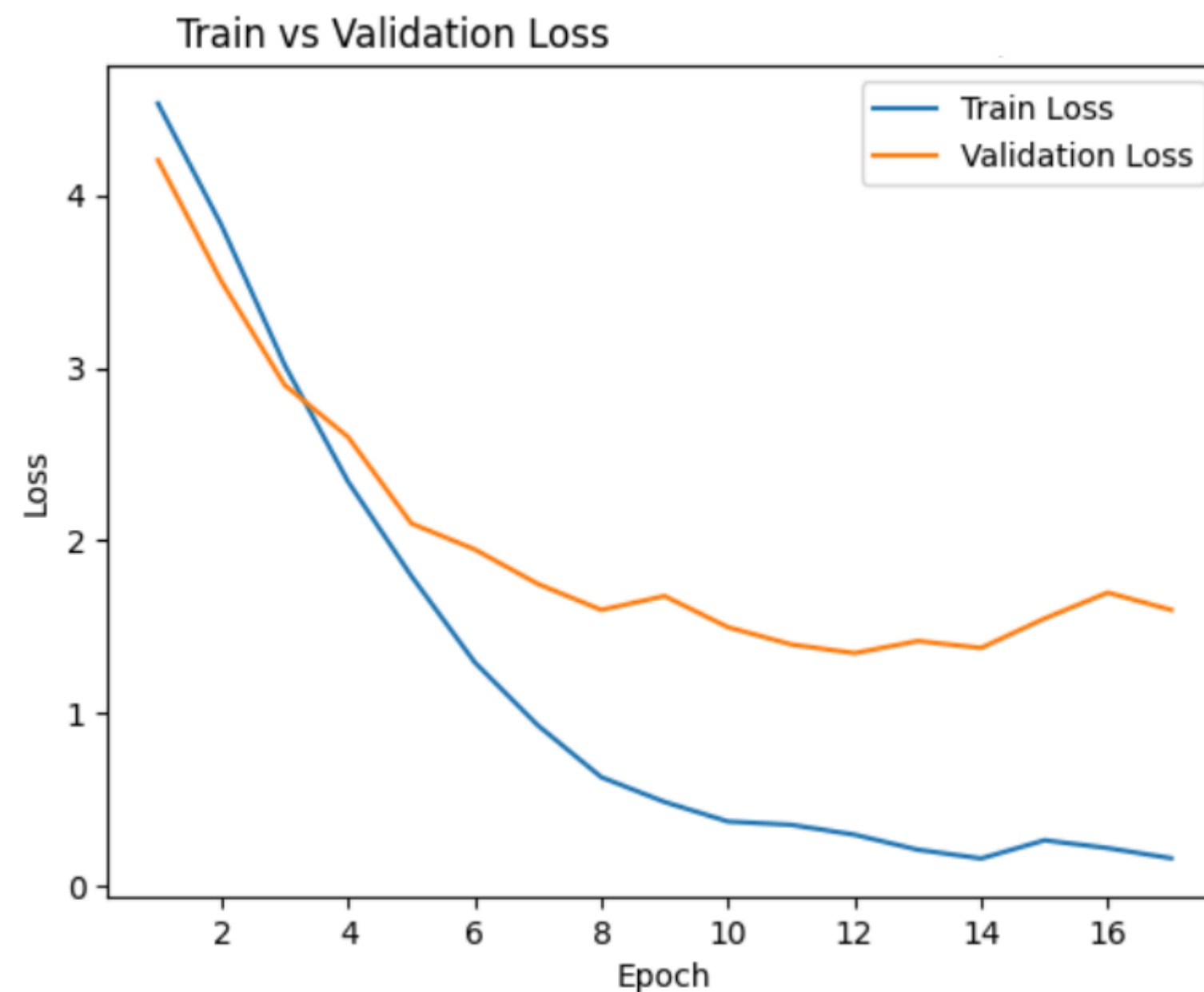
FULL FINE-TUNING VIVIT FOR WLASL-300

Pre-trained on: WLASL-100
Early Stopping implemented
Epochs: 30 (stopped at 22)
Training time: 38215s
Per-epoch training time: 1737.0s



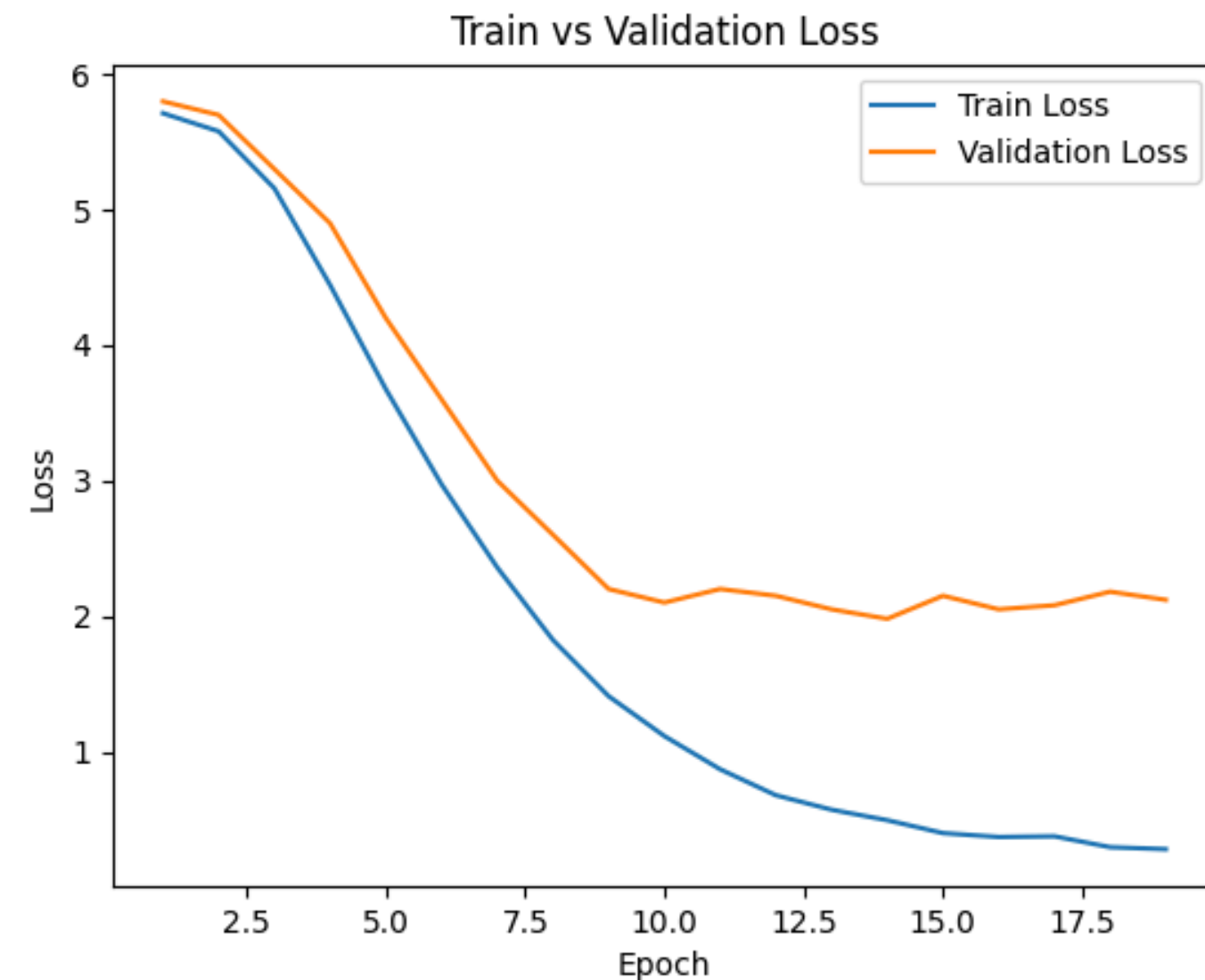
FULL FINE-TUNING SLOW-FAST FOR WLASL-100

Pre-trained on: Kinetic-400
Early Stopping implemented
Epochs: 30 (stopped at 17)
Training time: 5818s
Per-epoch training time: 342s
Test accuracy: 54.26%



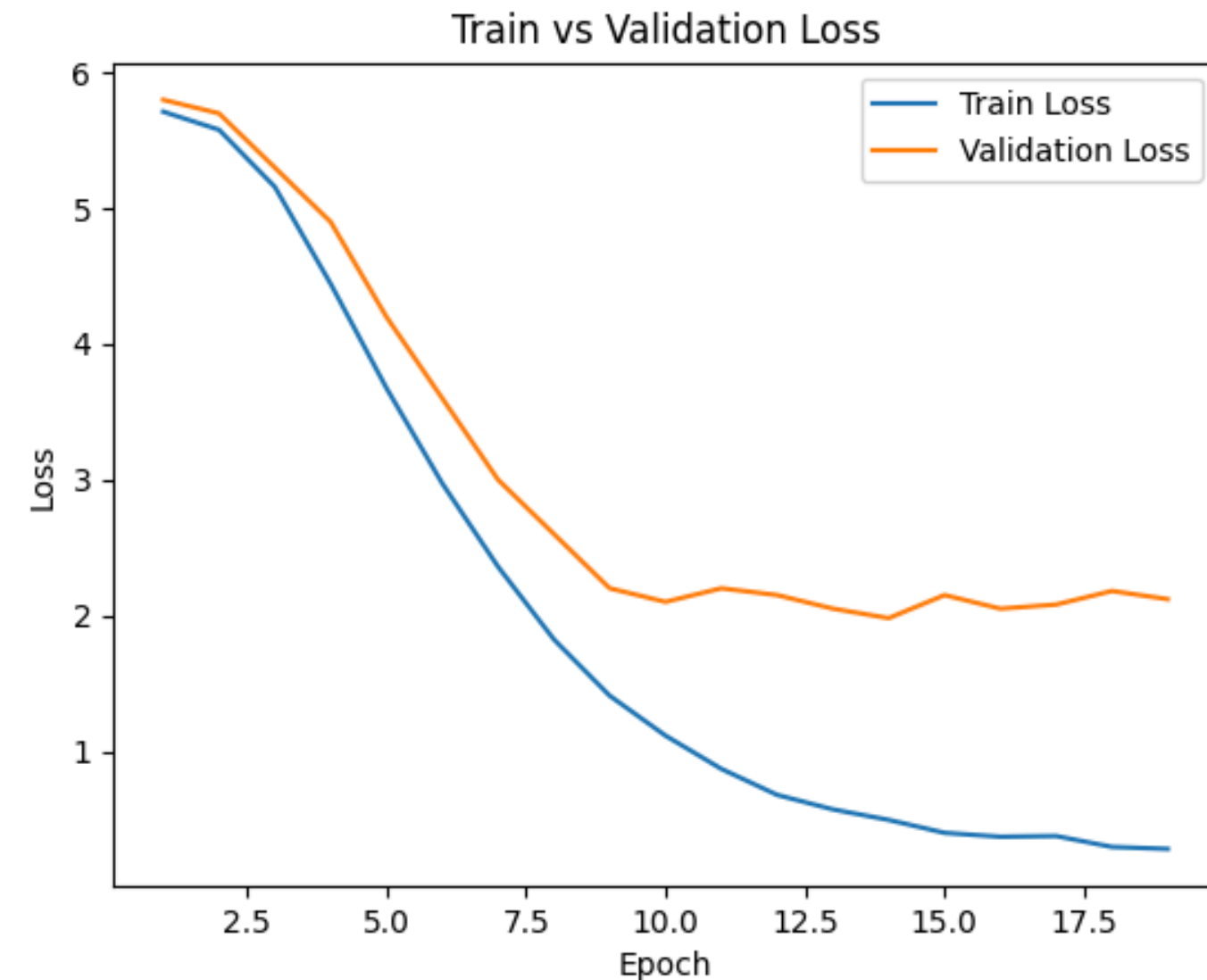
FULL FINE-TUNING SLOW-FAST FOR WLASL-300

Pre-trained on: Kinetic-400
Early Stopping implemented
Epochs: 30 (stopped at 19)
Training time: 16306s
Per-epoch training time: 858s
Test accuracy: 38.77%

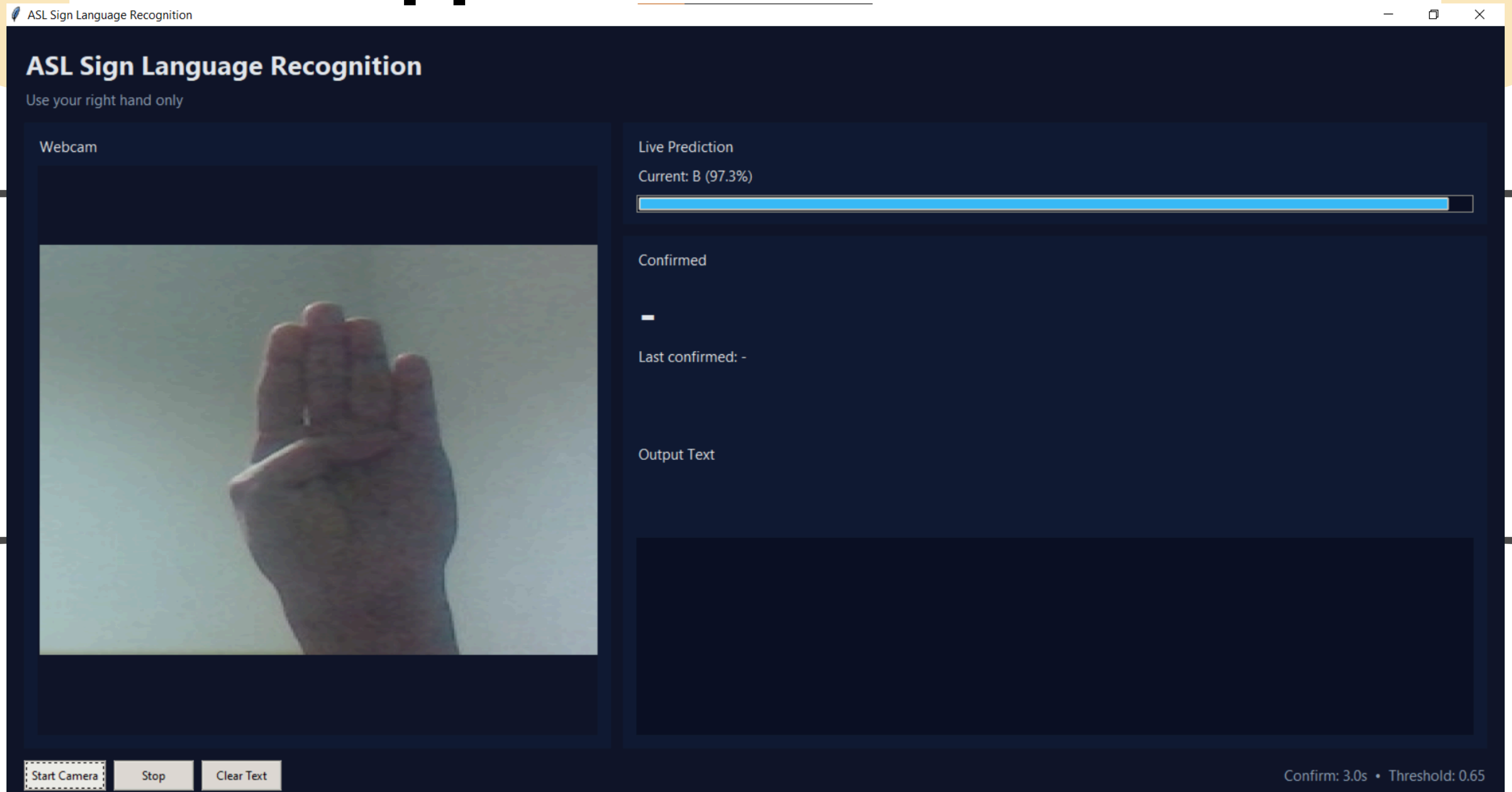


LORA FINE-TUNING SLOW-FAST FOR WLASL-100

Pre-trained on: Kinetic-400
Early Stopping implemented
Epochs: 30 (stopped at 26)
Training time: 8055s
Per-epoch training time: 310s
Test accuracy: 46.12%



Application Interface



Fixes

ASL Sign Language Recognition



ASL Sign Language Recognition

Use your right hand only

Webcam



Live Prediction

Current: space (96.7%)



Confirmed

spa

Last confirmed: space

Output Text

BBH

Start Camera

Stop

Clear Text

Confirm: 3.0s • Threshold: 0.65

MediaPipe addition

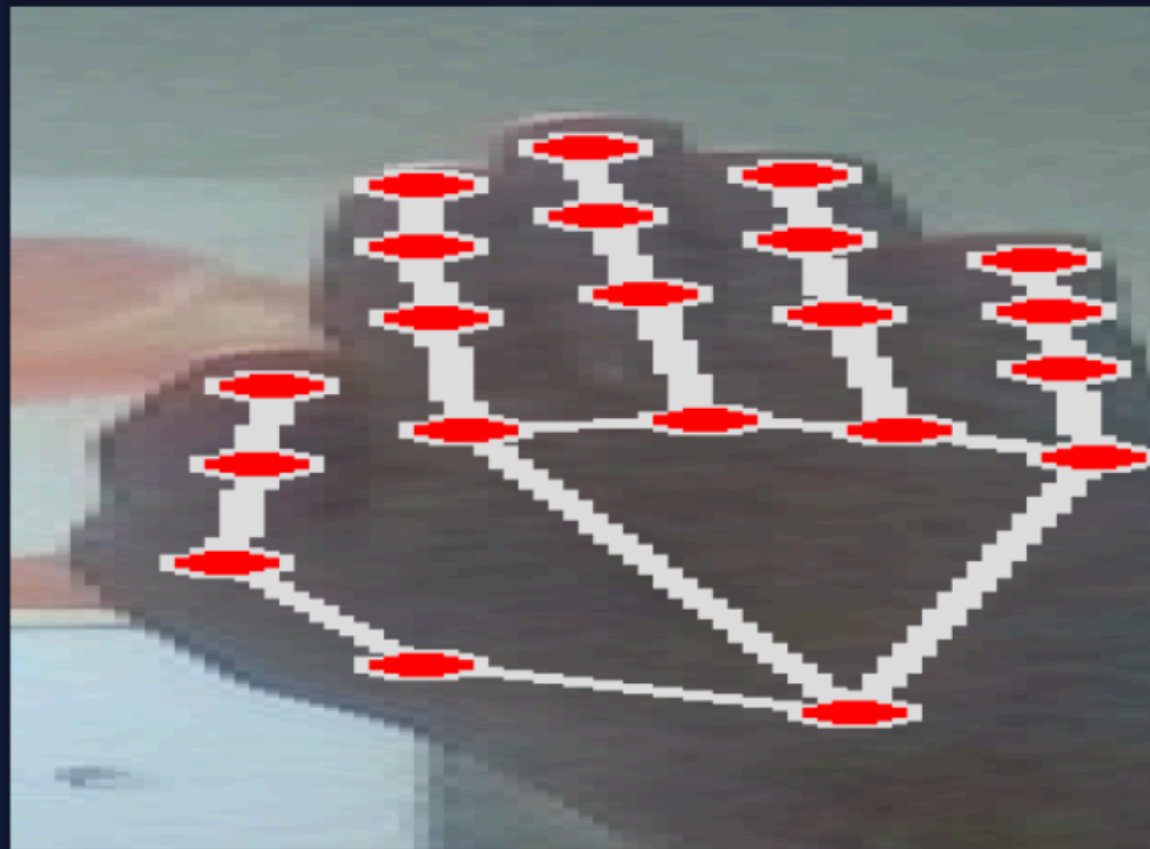
ASL Sign Language Recognition

— □ ×

ASL Sign Language Recognition

MediaPipe Right-hand ROI only

ROI Preview (RIGHT hand only)



Live Prediction

Current: Q (10.1%)



Confirmed

-

Last confirmed: -

Output Text

Start Camera

Stop

Clear Text

Confirm: 3.0s • Threshold: 0.65



THANK YOU