## The Expanding Scope of the Stability Gap: Unveiling its Presence in Joint Incremental Learning of Homogeneous Tasks

## Supplementary Material

We have included more detailed empirical results in the supplementary material.

**Linear Mode Connectivity** In Figure 7 and Figure 8 we show the full loss trajectory of the second task training for 5 epochs for both the linear path and the SGD path for CIFAR-10 and CIFAR-100 datasets, respectively.



Figure 7. In the 50-50\* setting, we present the complete loss path with SGD and linear connectivity between the warm-start and final models after 5 epochs of training using  $\lambda$  changed in steps of 0.01 on CIFAR-10 dataset with ResNet-18 model. In order to observe the stability gap, we had zoomed on the first 400 iterations in the main paper.



Figure 8. In the 50-50\* setting, we present the complete loss path with SGD and linear connectivity between the warm-start and final models after 5 epochs of training using  $\lambda$  changed in steps of 0.01 on CIFAR-100 dataset with ResNet-18 model. In order to observe the stability gap, we had zoomed on the first 400 iterations in the main paper.