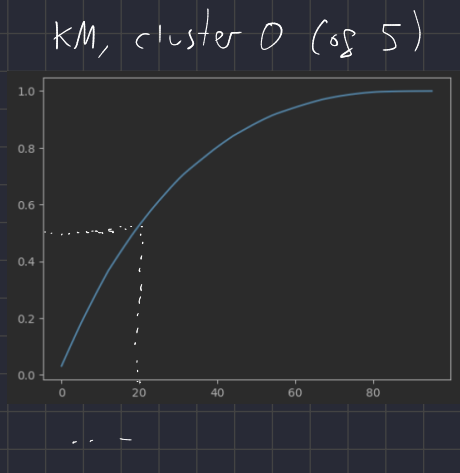
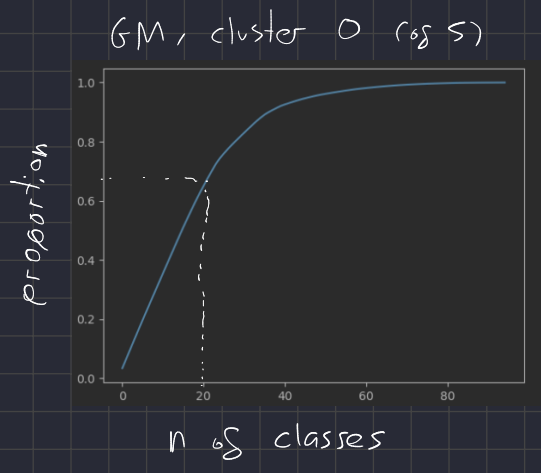
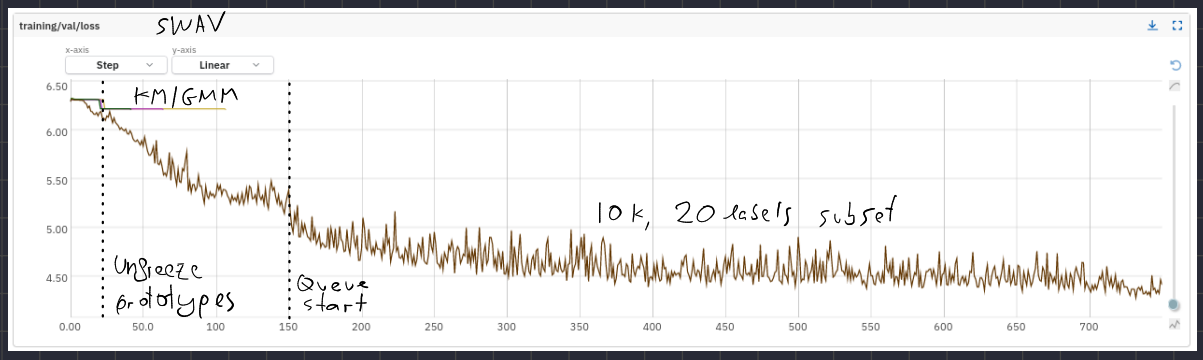
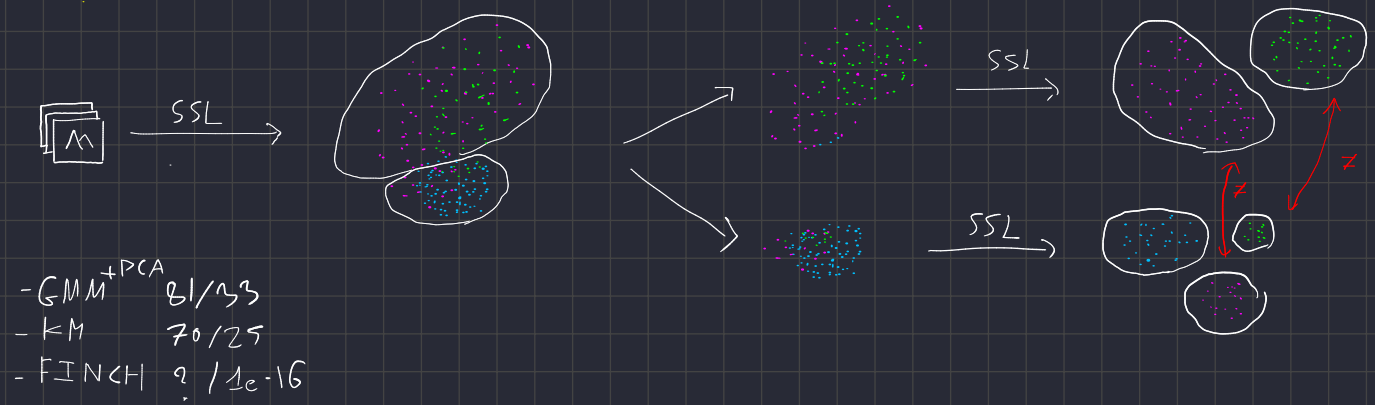


7/4



12/4

M - 0.87 (GM → KM)

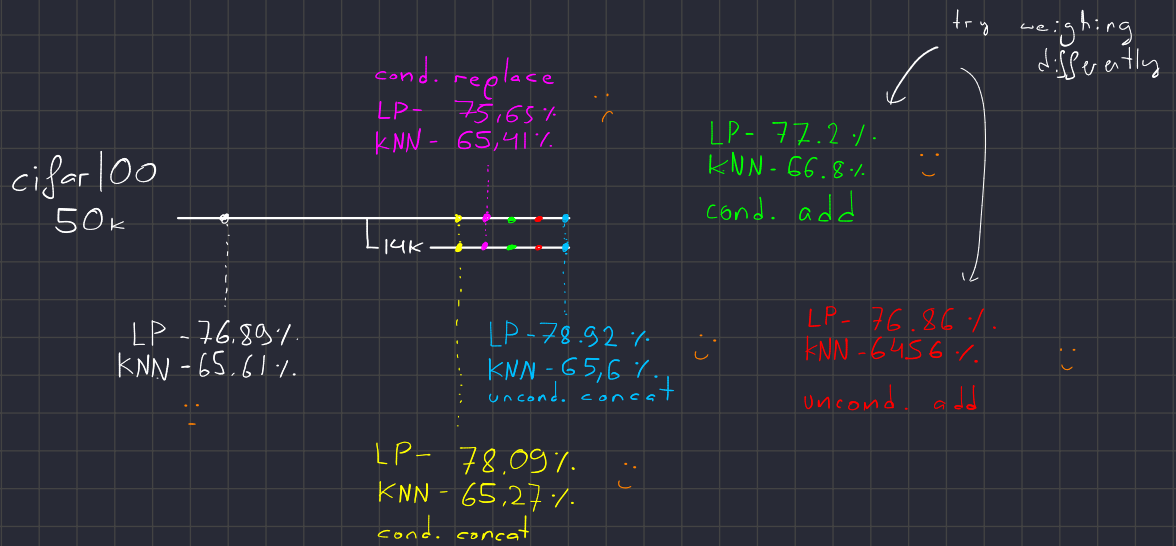
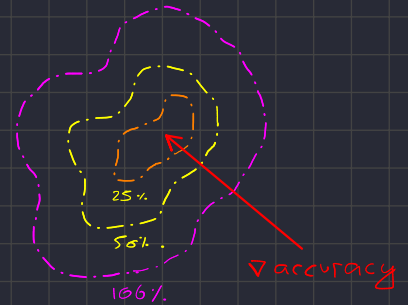
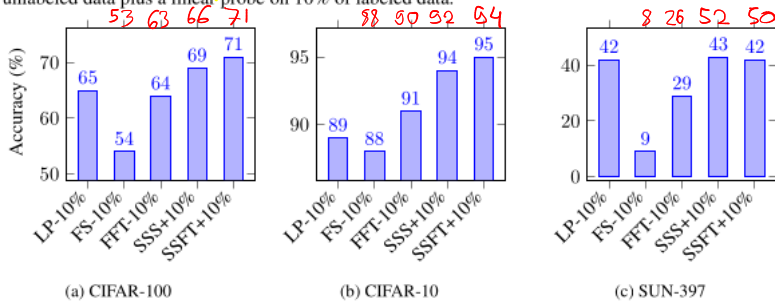
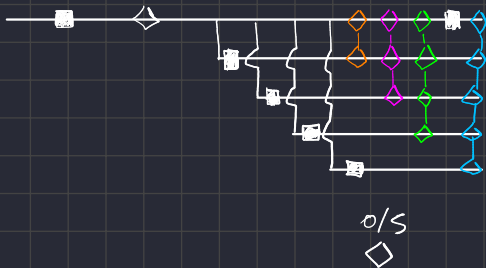


Figure 1: ResNet-50 (SWAV); Top@1 accuracy when comparing different ways to fine-tune the model backbone. From left to right: Linear Probe on 10% of labeled data, Full Submasking on 10% of labeled data, Full Fine-Tuning on 10% of labeled data, Self-Supervised Submasking on 100% of unlabeled data plus a linear probe on 10% of labeled data, Self-Supervised Fine-Tuning on 100% of unlabeled data plus a linear probe on 10% of labeled data.



19/04



LP/KNN

| | 0/5 | 1/5 | 2/5 | 5/5 |
|---------------------------|-------------|-------------|-------------|------------------------------|
| cond. replace | 76.99/65.61 | 76.09/66.46 | 74.91/66.3 | 71.71/64.79 |
| cond. add | 76.99/65.61 | 77.34/66.75 | 77.39/67.21 | 77.49/67.12 ¹ PCA |
| uncond. add | 76.99/65.61 | 77.37/64.96 | 77.59/64.84 | 76.81/63.15 |
| cond. concat ¹ | 76.99/65.61 | 78.17/65.85 | 78.68/66.61 | 79.37/65.36 |
| uncond. concat | 76.99/65.61 | 79.43/65.6 | 80.03/66.13 | 80.99/65.48 |

experts

1. dispatch 0 1 2 3 4

2. Unfair

Improvement

- PCA train uncond. emb → then cond. add (no labels)
- Weight embeddings of dispatcher vs experts differently

Ablations

- split data randomly instead
- Just train 6 different times on all data
- Randomly assign clusters during eval

Reference

- Compare to supervised version of the same
- Label-sparse setting

Expansion

- FGVC
- iNaturalist
- MocoV2

<https://www.kaggle.com/competitions/inaturalist-2019-fgvc6/data>

<https://paperswithcode.com/task/fine-grained-image-classification>

cars, cub, sun397