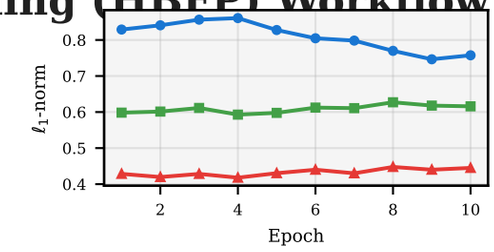
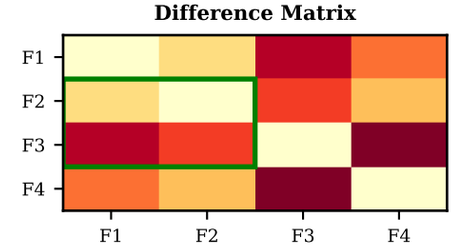
History-Based Filter Pruning (HBFP) Workflow



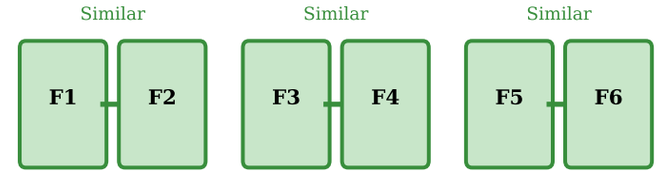
1 **Track Filter Norms**

Record ℓ_1-norm of each filter across T training epochs



2 **Compute Pairwise Differences**

$$D_{ij} = \sum_{t=1}^{T} |\ell_1(f_i^t) - \ell_1(f_j^t)|$$



3 **Identify Redundant Filters**

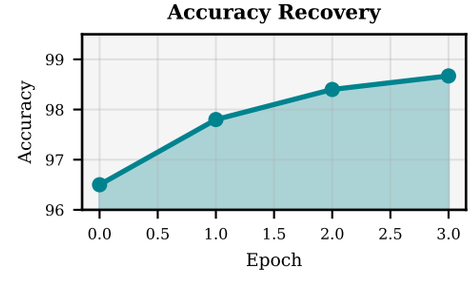
Select top-M% pairs with lowest cumulative difference

4 **Prune Redundant Filters**

Remove 20% of filters per round (weaker filter from each pair)

5 **Fine-tune Model**

Train pruned model for 3 epochs to recover accuracy



Repeat for multiple rounds