

Spatial Cognition



Autonomous Driving



Low-Altitude Sensing



Embodied Interaction



Why is this challenging?



Long-tail Data

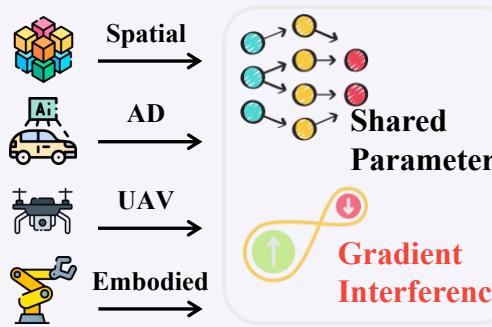


Gradient Interference

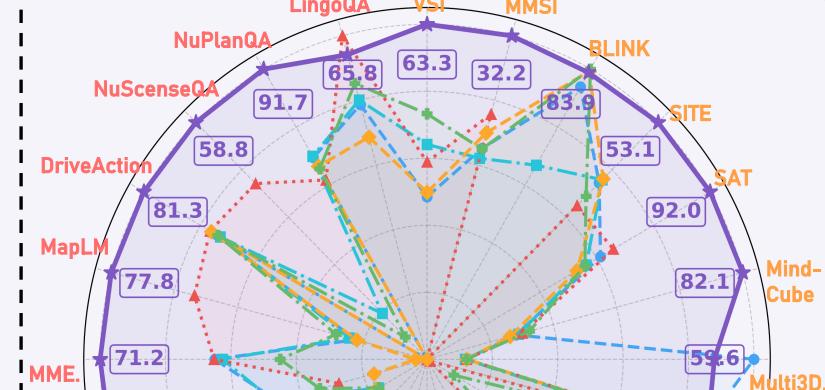
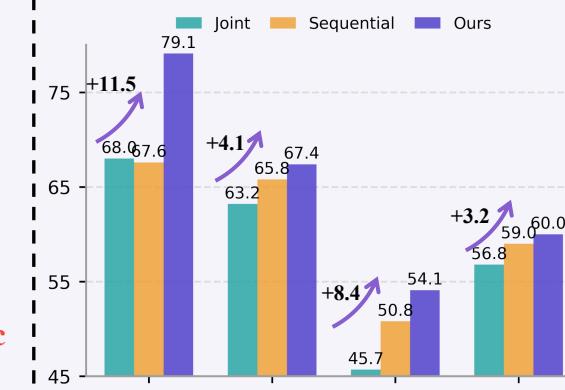
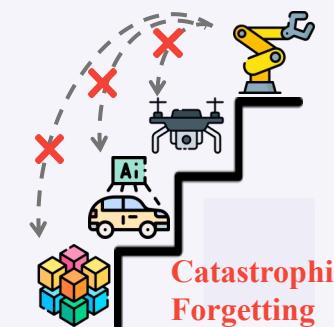


Catastrophic Forgetting

(1) Joint Training



(2) Sequential Training



(3) Ours

Train AD Expert



→

Consistent Improvements Across All Domains

Train UAV Expert



→

Expert Merging
(Reconcile)

Optional

Spatial Expert as
Foundation (Scaffold)Train Other Experts
(Specialize)Expert Merging
(Reconcile)

Embodied SFT

GRPO RFT

Legend:

- VeBrain (Blue line)
- Pelican-VL (Cyan line)
- MiMo-Embodied (Red line)
- RoboBrain2.5 (Orange line)
- Vlaser (Green line)
- EB-Habitat (Light Blue line)
- ACE-Brain (Purple line)