

Privacy-aware Early Alzheimer's Disease Prediction Using Low-rank Vision Transformers With Machine Unlearning

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KEY TAKE AWAY: Low-rank ViT framework achieves >95% accuracy for early AD prediction on sparse ADNI data (n<500), cutting trainable parameters 97.6% via LoRA-inspired adapters. A novel SVD-based unlearning method erases patient data in 28 seconds (vs. 4.2 hrs full retrain) with >92% accuracy retention — enabling privacy-compliant, GDPR/HIPAA-ready clinical AI.



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