



Healthcare applications

- Medical images
- Clinical texts
- Electronic health records
- Others

ML models & tasks

- Large language models and foundation models (ICML'24a, ICML'24b, NAACL'23a, NAACL'23b)
- Neural architecture search (ICML'24c, ICML'22, CVPR'21)
- Others (ICML'23c, ICLR'22, ACL'22, TACL'21a, TACL'21b, AAAI'21a, AAAI'21b, TMM'21, TWEB'22)

Instances of Skillearn

- Learning by self-explanation (NeurIPS'22)
- Learning by grouping (ICML'23b)
- Learning by teaching (ICLR'23b)
- Small-group learning (CVPR'22)
- Learning from mistakes (AAAI'22)
- Others (TACL'24, ACL'21a, TACL'22a, TACL'22b, ACM MM'22)

Skillearn framework

Skillearn: ML Training Strategies Inspired by Humans' Learning Skills (ICML'23a)

System

- Betty: A Programming Framework for Multi-level Optimization (ICLR'23a, Notable-Top-5% paper)
- Distributed Betty (NeurIPS'23b)

Healthcare applications

Foundation model for medical image segmentation (ICML'24b)

Foundation model on 1.3 million medical images (NeurIPS'23a)

Glaucoma progression tracking from OCTA Images (British Journal of Ophthalmology'24)

Gastrointestinal disease detection from endoscopy images (Scientific Reports'24, Nature Portfolio)

Pneumonia detection from CT scans (Scientific Reports'23, Nature Portfolio)

Brain tumor detection from MRIs (Scientific Reports'22b, Nature Portfolio)

Pneumonia detection from chest X-rays (Scientific Reports'22a, Nature Portfolio)

Skin lesion detection from dermoscopy images (ICML'23b)

Pathology visual question answering (ACL'21a)

3D medical imaging segmentation (AAAI'23)

Long-COVID information extraction (Scientific Reports'23, Nature Portfolio)

Medical dialog generation (EMNLP'20, ACL'21b)

Automated medical coding (IJCAI'21)

Prediction of motor dysfunction (Tomography'21)