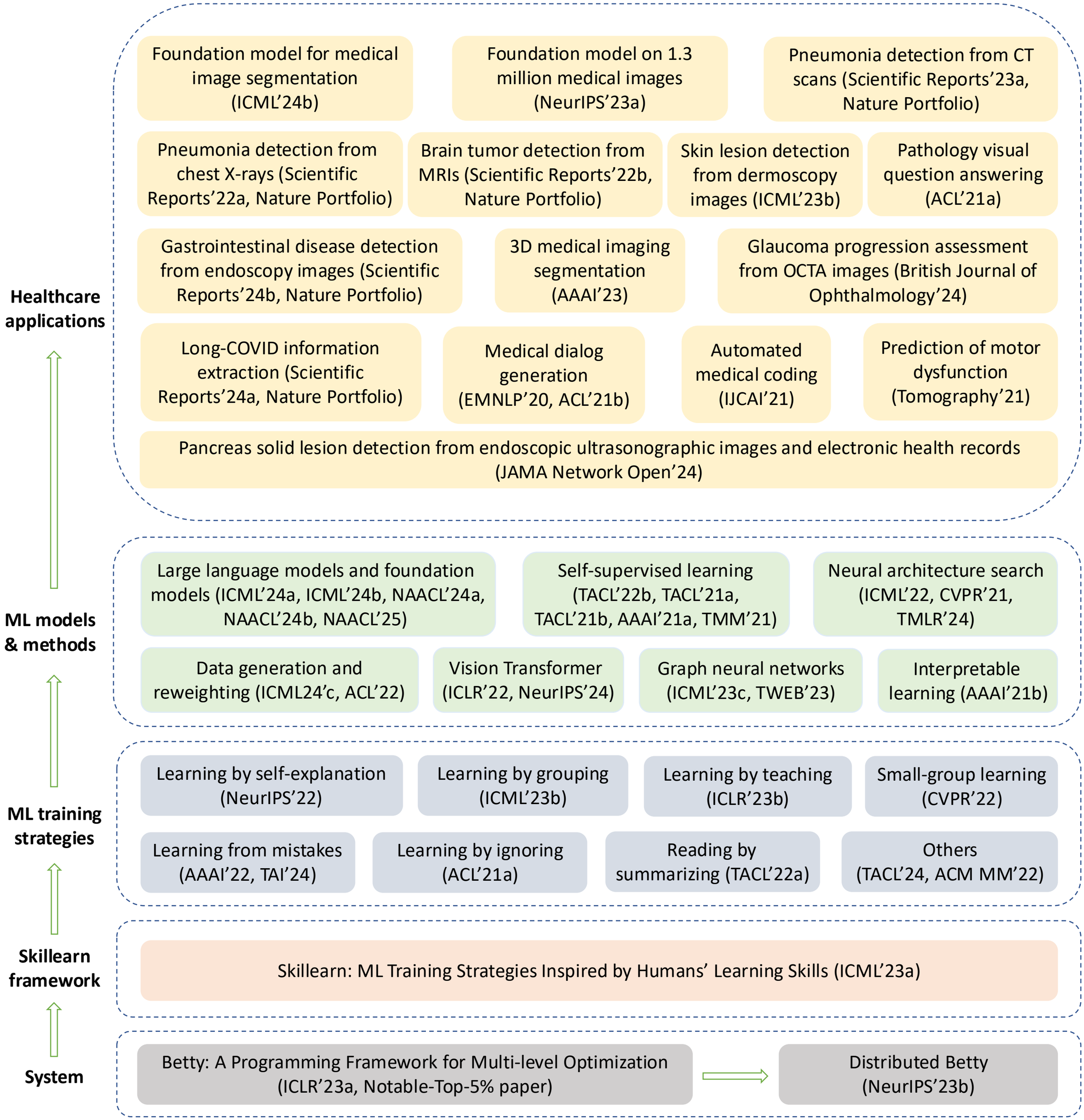
Healthcare applications
Foundation model for medical image segmentation (ICML'24b)
Foundation model on 1.3 million medical images (NeurIPS'23a)
Pneumonia detection from CT scans (Scientific Reports'23a, Nature Portfolio)
Pneumonia detection from chest X-rays (Scientific Reports'22a, Nature Portfolio)
Brain tumor detection from MRIs (Scientific Reports'22b, Nature Portfolio)
Skin lesion detection from dermoscopy images (ICML'23b)
Pathology visual question answering (ACL'21a)
Gastrointestinal disease detection from endoscopy images (Scientific Reports'24b, Nature Portfolio)
3D medical imaging segmentation (AAAI'23)
Glaucoma progression assessment from OCTA images (British Journal of Ophthalmology'24)
Long-COVID information extraction (Scientific Reports'24a, Nature Portfolio)
Medical dialog generation (EMNLP'20, ACL'21b)
Automated medical coding (IJCAI'21)
Prediction of motor dysfunction (Tomography'21)
Pancreas solid lesion detection from endoscopic ultrasonographic images and electronic health records (JAMA Network Open'24)
ML models & methods
Large language models and foundation models (ICML'24a, ICML'24b, NAACL'24a, NAACL'24b, NAACL'25)
Self-supervised learning (TACL'22b, TACL'21a, TACL'21b, AAAI'21a, TMM'21)
Neural architecture search (ICML'22, CVPR'21, TMLR'24)
Data generation and reweighting (ICML24'c, ACL'22)
Vision Transformer (ICLR'22, NeurIPS'24)
Graph neural networks (ICML'23c, TWEB'23)
Interpretable learning (AAAI'21b)
ML training strategies
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, TAI'24)
Learning by ignoring (ACL'21a)
Reading by summarizing (TACL'22a)
Others (TACL'24, 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)