

Medical Domain Specialization with MoE

Radiology Expert

- X-ray, CT, MRI interpretation
- Specialized conv layers for imaging
- High accuracy on visual diagnostics

Pathology Expert

- Microscopy image analysis
- Cell and tissue classification
- Digital pathology workflows

Clinical Notes Expert

- EHR text processing
- Symptom extraction
- Diagnosis code prediction

Genomics Expert

- DNA sequence analysis
- Variant interpretation
- Pharmacogenomics predictions

Performance Boost

Domain-specialized experts achieve 15-25% higher accuracy compared to generalist models, while maintaining computational efficiency through sparse activation.