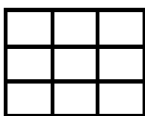


University of Michigan data

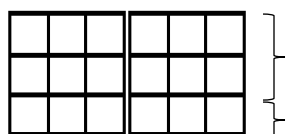
Structured

Demographics
Billing data
Problem list
Lab data



Preprocessing

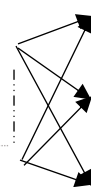
EARLY FUSION



Test Train

Data resampling

Under sampling
Over sampling



ENSEMBLE LEARNING

Bagging
Stacking

Glaucoma

No Glaucoma

Model Evaluation

Internal Validation

Test data



Model Explainability for clinical utility

- Model Coefficients
- SHAP values

Generalizability
External Validation Stanford University data

Model Discrimination Fairness

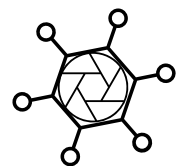
Test set (UoM; SU) Demographic groups (UoM + SU)

Unstructured

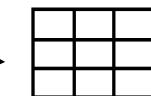
Free text of eye visit note



Preprocessing



Large Language Model



Embeddings