

Structured vs Unstructured Data

Structured Data

ID	Diagnosis	Value
001	E11.9	140
002	I10	145/90
003	J45.909	Normal

DB

Unstructured Data

Patient presents with chest pain...

History of hypertension and diabetes

Physical exam shows...

NLP



Structured Data

- Predefined fields & formats
- Easily queryable
- Standardized codes (ICD, LOINC)
- Direct database storage
- Machine-readable



Unstructured Data

- Free text clinical notes
- Medical images (X-ray, MRI)
- Scanned documents
- Voice recordings
- Requires NLP for extraction



Hybrid Documents

Many clinical documents combine structured fields (dates, vital signs) with unstructured narratives (clinical impressions)