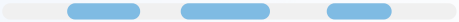
Clinical NLP Task Taxonomy

Named Entity Recognition

EXTRACTION

Identify diseases, medications, symptoms, procedures from clinical text



EXAMPLE

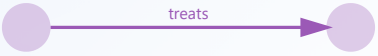
Patient has diabetes and takes metformin 500mg daily

94% F1

Relation Extraction

RELATION

Find relationships between medical entities (drug-disease, symptom-cause)



EXAMPLE

Aspirin →treats→ Headache

91% F1

Temporal Expression

TEMPORAL

Normalize time expressions and sequence medical events chronologically

EXAMPLE

"2 weeks ago" → 2024-01-01

"after surgery" → T+1d

88% Acc

Negation Detection

LOGIC

Identify negated medical concepts and uncertainty modifiers

EXAMPLE

"No signs of infection" ✓

"Possible pneumonia" ?

92% Prec

Medical Code Mapping

MAPPING

Map clinical text to ICD-10, CPT, SNOMED-CT codes

EXAMPLE

"Hypertension" →

ICD-10: I10

87% MAP

Clinical Text Summarization

GENERATION

Generate concise summaries from lengthy clinical notes

EXAMPLE

5-page note → 3-line summary

Compression: 95%

ROUGE 0.82