

Input Test Sentence

1. This cannot endure , "Marlow told BBC television 's Newsnight programme on Thursday ."
2. South Korea made virtually certain of an Asian Cup quarter-final spot with a 4-2 win over Indonesia in a Group A match on Sat.
3. There is now evidence to suggest a central role for the dopaminergic system in restless legs syndrome (RLS) .

PER LOC ORG MISC Disease

Definitions & Few-Shot Examples

Entity Types Definitions

Static Few-shot
Demonstrations
(entity-level
contrastive
samples)

Positive
Gold entity

Negative
Span Error
Type Error
Spurious Entity
Omission Entity

Retrieval & Disambiguation Agent

Central LLM Planner

Wikipedia
Query

Knowledge Retrieval
Agent

Disambiguation
Query

Disambiguation
Agent

ICL NER Prompt Constructor

Multi-Knowledge Inference

Initial Output

restless legs syndrome South Korea
Newsnight BBC television Indonesia
Asian Cup Group A program Marlow

Infer

NER Prediction
Module

Reflection-Enhanced Inference

Reflective Analysis Agent

Predefined Criteria

Span Error Analysis
Type Error Analysis
Spurious Detection
Omission Detection

Infer
Reflect

Reflected Output

RLS^{new+} Group-A program
Newsnight Newsnight BBC television
Asian Cup restless legs syndrome
Marlow Indonesia South Korea