Temporal Game
A New Perspective on Temporal Relation Extraction

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*An **interactive, point-base,** approach to **Temporal Relation Extraction**.*

Overview

Motivation

Temporal relation extraction is crucial for building coherent timelines, answering time-sensitive questions, and following event narratives, yet it still suffers from high cognitive load and inconsistent outputs when annotators must choose among 13 interval-level Allen relations. The Temporal Game reframes the task to lower this barrier while preserving expressiveness.

Point Base Approach

Instead of selecting interval relations directly, users classify point-wise comparisons—before, after, equal, or vague—between entity start and end points. After each move, a temporal-closure engine infers the remaining relations and flags contradictions, keeping the timeline globally consistent with minimal manual effort and supporting both intervals and instants.

Game Mode

The web demo turns TempEval-3 sentences into puzzles where players annotate 2–5 entities at a time. Interval annotations are converted into point relations, closure fills in the board, and a scoring function rewards correct predictions, coherent timelines, and potential reinforcement-learning agents that could learn efficient annotation strategies.
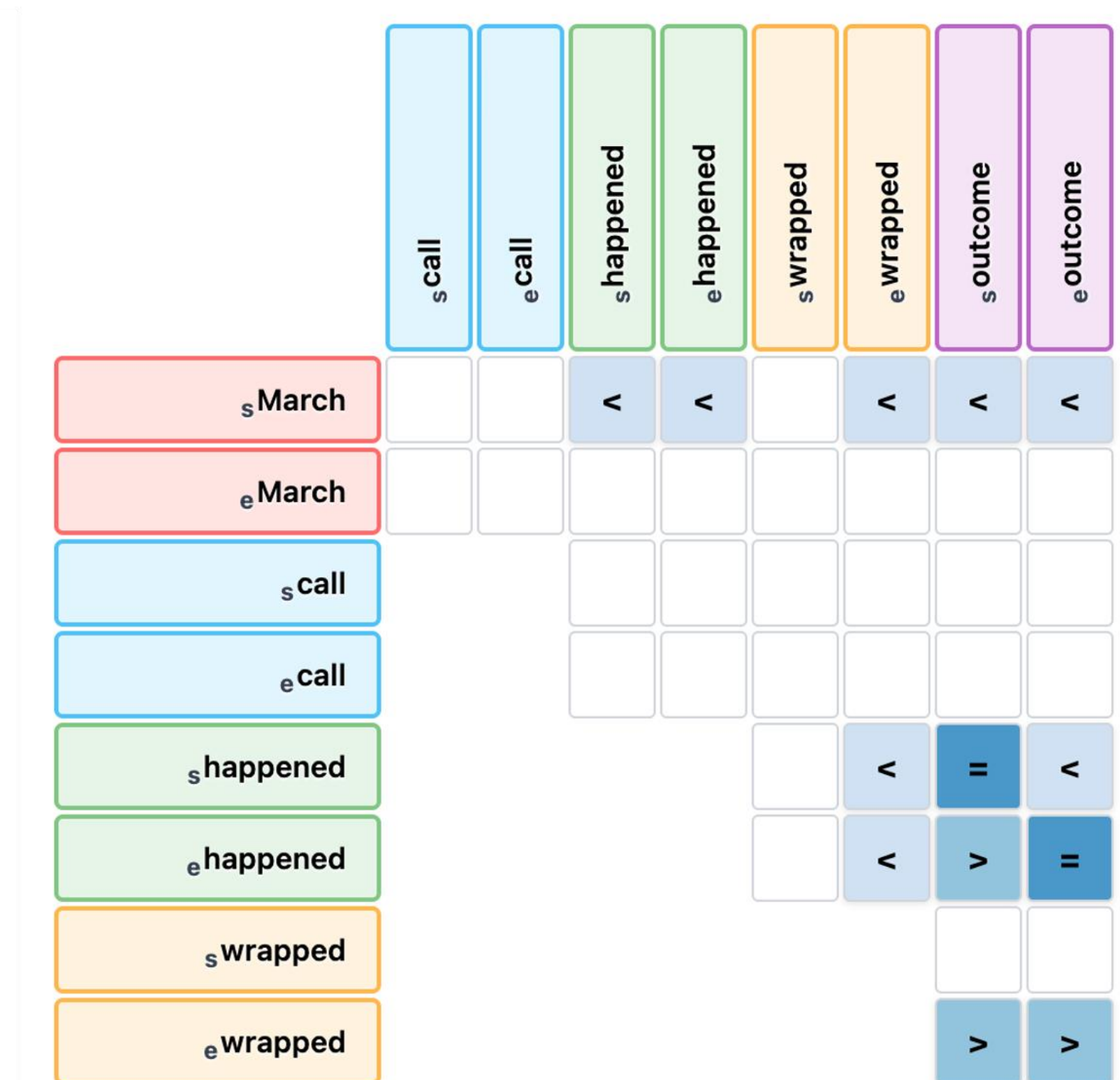
Annotation Mode

Annotators can upload raw text or JSON, automatically detect temporal entities, or highlight spans manually. Entity types are switchable between interval and instant, dynamic mode guides users through one relation at a time (randomly or via classifier confidence), and completed timelines are exportable as JSON to streamline research workflows.

The Game

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The **call**, which **happened** as President Barack Obama **wrapped** up his first presidential visit to Israel, was an unexpected **outcome** from a Mideast trip that seemed to yield few concrete steps.

Playing the Game

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