1. Labeled Alignment Scheme

Suppose each subfigure presents an RTE sample. The vertical text is the \( \ell_v \), and the horizontal text is the \( \ell_h \). The solid squares represent normal links, and the crosses represent negative links which is introduced by labeled alignment scheme.

2. Alignment-based Entailment Systems

(a) Baseline RITE system based on normal alignment scheme

(b) Proposed RITE system based on labeled alignment scheme that better solves non-entailment pairs

3. Classification Component

Link Type Features:
- Whether \( e_i \) and \( e_j \) are in an antonym list
- Whether \( e_i \) and \( e_j \) are unequal numbers
- Whether \( e_i \) and \( e_j \) are different named entities
- Relation of \( e_i \) and \( e_j \) in an ontology (hyponym, sibling, etc.)
- Ontology-based similarities of \( e_i \) and \( e_j \) (CiLin, Hownet)
- Count of common characters
- Length of the common prefix
- Length of the common suffix
- Tuple of the ancestors in an ontology
- Tuple of whether \( e_i \) or \( e_j \) is in a list of negative expressions
- Tuple of whether \( e_i \) or \( e_j \) is the head of a noun phrase

Sample Representation:
Single flat vector that combines the features extracted from all the links of the automated alignment

Classifier:
RBF-kerneled SVM (LibSVM) with the default parameters
1-vs-rest framework for the MC task

4. Evaluation Results

<table>
<thead>
<tr>
<th>Run</th>
<th>Macro-F1 on BC</th>
<th>Macro-F1 on MC</th>
<th>Worse Rank. on RITE4QA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run01(char-overlap)</td>
<td>67.04</td>
<td>39.95</td>
<td>6.67 *</td>
</tr>
<tr>
<td>Run02(normal align.)</td>
<td>66.89</td>
<td>44.88</td>
<td>0.00 *</td>
</tr>
<tr>
<td>Run03(labeled align.)</td>
<td>73.84</td>
<td>56.82</td>
<td>3.67 *</td>
</tr>
</tbody>
</table>

(* not checked during the formal run due to the limit of time, might be improved in the future)