

Currently known:

1. Definition of ICL ability
  - a. Copying ability
  - b. Rule Learning ability
2. Metamorphic testing for evaluation
3. The two most important factors affecting ICL performance.
  - a. Selection
  - b. Ordering

My opinion:

1. Metamorphic relation construction

Requirement: perturbation of examples. Foreseeable (desirable properties).

- a. Order
- b. Shot quantity
  - i. 3->4 3->2
- c. Format: (e.g., table → natural language, JSON → plain text)
- d. Paraphrase
- e. Blind Copying: Truncate, mask,  
ABC AB>C  
A -> C

....

To do:

1. How to ensure that the testing task is not affected by the model's own language ability and internal knowledge.
  - a. Example ordering is an important factor affecting ICL performance, which makes it difficult for us to predict the results of perturbation.
2. Test case construction.
  - a. Fairness
3. ICL method
4. Baseline

Next step:

1. Specific perturbation for 5
2. Formal definition

## Unstructured Text

### Prompt:

The Baptist Mission Union censured **521351cabab13f591** for abandoning his post without authorization and going to Rangoon; he resigned from the Missionary Union and accepted, unpaid, the affiliation of American Baptist Free Mission Society ... In 1872, long after the death of **521351ca**

**Label:** ba13f591

### Copying

### ICLEval

## Structured Text

### Prompt:

c5f3b8 : On August 15, a convention in Atlanta, ...  
5baa0d : Moreover, cloudy days are often warm and ...  
79bbc3 : In this period, the band won several prizes ...  
**71af7d** : In winning the ... Gold Cups in the 1930s.  
340b02 : Nevertheless, it has ... in eukaryotic cells.  
**71af7d** :

**Label:** In winning the ... Gold Cups in the 1930s.

### Format rules

#### Prompt:

(n-shot examples...)  
Input:  
Index	name	age	city
1	Elijah Morgan	36	Pittsburgh
Output:  
**Label:**  
<person>  
<name>Elijah Morgan</name>  
<age>36</age>  
<city>Pittsburgh</city>  
</person>

### Statistics rules

#### Prompt:

(n-shot examples...)  
Input:  
588 and 823 are friends.  
**885** and 823 are friends.  
795 and 588 are friends.  
890 and 823 are friends.  
**885** and 588 are friends.  
890 and 588 are friends.  
795 and 823 are friends.  
Query: Who are the friends of **885**?  
Output:  
**Label:** 823, 588

### Order rules

#### Prompt:

Input: activity, brief, wonder, anger  
Output: anger, wonder, activity, brief  
Input: market, forever, will, curve  
Output: curve, will, market, forever  
Input: pain, leading, drag, shoot  
Output: shoot, drag, pain, leading  
Input: shopping, drama, care, start  
Output:

**Label:** start, care, shopping, drama

### List Mapping

#### Prompt:

Input: [1, 3, 6, 1, 83]  
Output: [3]  
Input: [5, 6, 35, 3, 67, 41, 27, 82]  
Output: [6, 35, 3, 67, 41]  
Input: [8, 45, 6, 18, 94, 0, 1, 2, 7, 34]  
Output: [45, 6, 18, 94, 0, 1, 2, 7]  
Input: [2, 7, 66, 6, 93, 4, 47]  
Output:  
**Label:** [7, 66]

**Tips:** elements 2 through N + 1,  
N = element 1

### Learning