Title: A Manually-Constructed Physical Commonsense Reasoning Dataset for Thai

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1. Introduction

We introduce a new evaluation dataset for physical commonsense reasoning in Thai. The dataset follows the format of the Physical Interaction: Question Answering (PIQA) benchmark (Bisk et al., 2020), presenting a prompt with two possible solutions. It contains 100 manually-created examples, each verified by a native speaker of Thai. This resource is contributed to the MRL 2025 Shared Task to help foster the development and evaluation of multilingual reasoning capabilities in large language models.

2. Dataset Description

This dataset offers 100 distinct, manually annotated examples designed for evaluating physical commonsense reasoning. The examples range from straightforward, covering fundamental physical concepts like gravity and directions, to those requiring specific Thai knowledge, such as Muay Thai movements.

2.1. Language and Dialect

The dataset is created for the Thai language. Specifically, all examples are written and verified using the central Thai dialect.

2.2. Format and Examples

Our dataset follows the PIQA format. Each instance consists of:

1. A **prompt** describing a situation or goal.
2. Two candidate **solutions** that complete the prompt. Only one solution is physically correct or more plausible than the other.

The task is to choose the correct solution. All examples are designed to require reasoning about the physical properties of objects and the outcomes of actions.

Example:

Below is an example from our dataset, shown in Thai with an English translation.

- **Prompt:** ในศึกมวยไทย 7 สี ซุปเปอร์เล็ก จิตรเมืองนนท์ ได้เตะคู่ต่อสู้ด้วยท่าจระเข้ฟาดหางเข้าที่ปลายคาง คู่ต่อสู้ของเขาหน้าหันไปทางซ้ายก่อนล้มลงไปทางด้านซ้าย ซุปเปอร์เล็กใช้ขาข้างใดเตะท่าจระเข้ฟาดหาง

- ○ *(Translation: In the 7 Colors Muay Thai Battle, Superlek Jitmuangnon kicked his opponent with the crocodile kick technique to the chin. His opponent's face turned to the left before he fell to the left side. Superlek used which leg to perform the crocodile kick?)*
- **Solution 1 (Incorrect):** ขาข้างซ้าย
  - ○ *(Translation: Left leg.)*
- **Solution 2 (Correct):** ขาข้างขวา
  - ○ *(Translation: Right leg.)*

Figure 1: A Muay Thai fighter performing a crocodile kick with his right leg.
(source:https://www.facebook.com/photo/?fbid=596832857829597)

References

- Bisk, Yonatan, et al. "Piqa: Reasoning about physical commonsense in natural language." Proceedings of the AAAI conference on artificial intelligence. Vol. 34. No. 05. 2020.