Malaysia AI Olympiad (MAIO) 2025 Briefing

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On behalf of Malaysia AI Olympiad Committee

Introduction: Olympiads

National Selection Tests

IAO - MyAO
Malaysian Astronomy Olympiad

IChO - K3M
Kuiz Kimia Kebangsaan

IEO - Kijang
Kijang Economics Competition

IESO - MyESO
Malaysian Earth Science Olympiad

IJSO - MyJSO
Kancil Science Competition

IMO - IMONST
International Mathematics Olympiad National Selection Test

IOAA - MOAA
Malaysia Olympiad on Astronomy and Astrophysics

IOI - MCC
Malaysian Computing Challenge

IOL - MyCLO
Malaysian Computational Linguistics Olympiad

IPO - MyPO
Persatuan Pendidikan Falsafah dan Pemikiran Malaysia (PPFPM)

IPhO - OFM
Olimpiad Fizik Malaysia

Introduction: AI Olympiad

Morphological Inflection in Navajo

Problem Description

Morphological inflection is a task in computational linguistics wherein the correct form of a word has to be generated from a lemma (base form) and a target morphosyntactic specification, e.g.

```
alzhish  +  V;IND;PFV;NOM(2,SG) -> íínílzhiizh
```

where *alzhish* is the Navajo word for 'dance', and *íínílzhiizh* is the second [2] person , singular [SG], nominative [NOM] form of the verb [V] in the indicative [IND] mood and perfect [PFV] aspect. You can find out more about the annotation schema used for the morphosyntactic specification of the target forms here.

Here, we ask you to train a machine learning model to perform morphological inflection in Navajo.

Your Task

The code below is a near reimplementation of the approach to moprhological inflection presented in Wu et al.. The reimplementation uses high-level API from the *transformers* Python library. High-level APIs are convenient as they save us a lot of code-writing, but they also obscure certain aspects of the implementation.

Help BOBAI: Classify an unknown langua

Background

Bob's AI start-up, Bobai, builds AI solutions for other companies which have to proce
text in their daily tasks. Bobai serve companies from all over the world, and they prid
ability to handle a variety of languages, from English, through Arabic to Mandarin. Th
success is that all of their products are based on a strong multilingual language enco
infrastructure is actually highly optimized for this specific language encoder, which m
super fast and efficient, i.e. very attractive to clients.

Task

But mBERT is trained on just 101 languages. So what happens when one of Bobai's biggest clients, Amoira, requests support for a new language X that is not among those 101 languages? Bob and his team have to find a way to meet this request, as they cannot risk losing the client.

Save the Factory: F

Background

In the whimsical town of Widgetville, t
of unmatched quality with a **Ruby** and
to have infiltrated the assembly lines, i
and labels. As the company's freshly ap
to unravel this puzzling situation.

Task

- Your ultimate goal is to effectively
- You have recovered the labels for a previous month's supply of widgets, and should use these to classify the remaining widgets.
- For every widget, you have an access to the so-called "The Pulse of the Machine" -- a unique numerical representation of each widget, which features 8 magic threads (represented by 178 numbers) woven into the central timeless crystal. Therefore, each widget is described by (178 x 8) array. You must use these data to recover the **Ruby** and **Sapphire** labels.

Malaysia AI Olympiad (MAIO) brings this learning opportunity and exposure to students in Malaysia

Malaysia at IOAI 2024

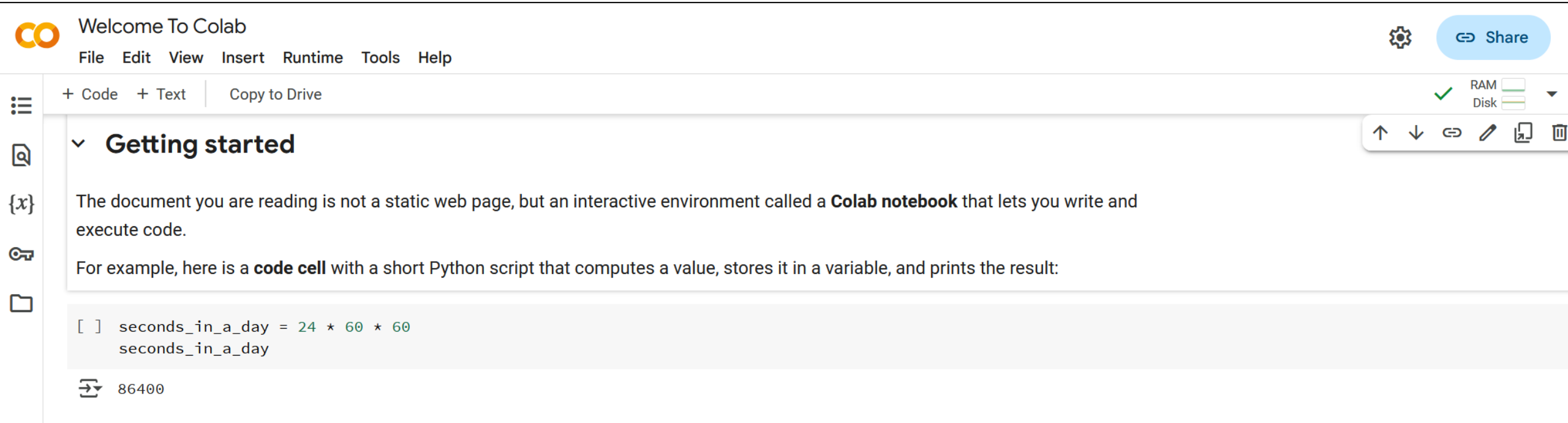
Establishing Malaysia AI Olympiad (MAIO) in 2025 brings this learning opportunity and exposure to students in Malaysia!

MAIO 2025 format

- Fully online thru competition server (announce on Mar 8th Sat)
- Submissions open: Mar 14 8:00 pm
- Submissions close: Mar 16 Sun 8:00pm
- 20 objective questions +3 long form questions
- Requirements:
  - Web browser and internet connection
  - Learn how to run Jupyter notebooks
- Mock test will be made available on Mar 8th for you to get familiar with the platform

Jupyter notebooks (.ipynb)

- Common file format for prototyping Python code
- Easiest: https://colab.research.google.com/
- More effort: Install Python and Jupyter Lab on your own computer



Encouragement to join MAIO 2025

- For complete beginners: Get exposure to field of AI

Learning opportunity!

- For enthusiasts: Test your level of mastery

Learning opportunity!

- For olympiad students: Try a new kind of olympiad

Learning opportunity!

~As long as you are a learner, MAIO is for you!~

What do you get from joining MAIO 2025?

Participation certificate

Note: You must make submissions to all objective questions and at least one long-form question!

Further training opportunity

Opportunity for national team training:

- Mar 2025: MAIO Top N students (tentatively 30 pax)
- *Apr/May: Selection 1
- *Jun 2025: Selection 2

Opportunity to carry the Malaysian flag

Opportunity for national team selection:

- *Jul 2025: Finalized roster (1 team of 4 pax)
- Aug 2 – 9, 2025: IOAI 2025 @ Beijing, China

**schedule subject to adjustment in response to international Olympiads*

Eligibility

Current students studying in Malaysia who are:

- strictly less than 20 years old by Aug 2nd 2025 (**birth date on or after Aug 1, 2005**), and
- will not have started taking degree-level coursework by Aug 2nd 2025. Post-SPM, pre-degree programme students are eligible.

You are welcome to take part in MAIO 2025 if you don’t meet the eligibility requirements. I just cannot take you further!

Preparing for MAIO 2025

From our website:

- https://www.aiolympiad.my/for-students
- https://ioai-official.org/syllabus-2025/

New things introduced in this briefing:

- Learn how to use Jupyter notebooks
- Watch for competition server announcement next Sat
- Watch Discord server for Q&A / updates

Questions?

Join our Discord:

https://discord.gg/rDPT9vSfXq

Email us:

hello@aiolympiad.my