Application: 5223

Falcon

Page: General Information

Provide information about the company to be considered for the award. If you will be nominating an individual, specify the nominee's employer.

Name of Organization/Company

Technology Innovation Institute (TII)

Additional Contacts

I would also like to have others receive emails about the disposition of our entries.

Page: Entry Information

Entry Title

Falcon

Category

E05. New Product of the Year - Artificial Intelligence

New Product Submission Format

Written Answers

a. Briefly describe the organization that developed the nominated new product: its history and past performance (up to 200 words). Required

The Technology Innovation Institute (TII) is a leading global scientific research center dedicated to the development of cutting-edge technologies to solve society's greatest challenges today and in the future. The institute, headed by CEO Dr. Najwa Aaraj, was founded in May 2020 and serves as the applied research pillar of Abu Dhabi's Advanced Technology Research Council (ATRC) which oversees technology research in Abu Dhabi. With more than 1,200 scientists and researchers from over 80 countries working across 10 research centers, TII's core research areas span advanced materials, autonomous robotics, cryptography, AI and digital science, directed energy, quantum, secure systems, propulsion and space, biotechnology, and renewable and sustainable energy. In addition to its own research, TII partners with industry-leading universities, research institutions and industry partners from all over the world. Over the past four years, the institute has continuously expanded its projects in the field of AI with noteworthy achievements such as the launch of Falcon, the UAE's first generative AI large language model (LLM), the establishment of the Falcon Foundation for open sourcing of Generative AI models and the development of the Arab World's first quantum computer.

b. Specify the date on which this nominated product was introduced to the marketplace. Outline the nominated product's features, functions, benefits and novelty (up to 250 words). Required

The second iteration of TII's renowned generative LLM, Falcon 2, was launched on May 13, 2024 and consists of two separate versions Falcon 2 11B and Falcon 2 11B VLM. With 11 billion parameters and 5.5 trillion tokens, TII's latest model more efficient and more powerful than before. Released under the TII Falcon License 2.0 and the permissive Apache 2.0-based software license, both models are open-source, giving developers worldwide unrestricted access. Furthermore, the Falcon 2 11B models are multi-lingual allowing them to seamlessly handle tasks in English, French, Spanish and German as well as various other languages. This makes Falcon 2 the ideal solution for diverse scenarios across industries and borders. Falcon 2 11B VLM is a vision-to-language (VLM) model that enables identification and interpretation of images and other visuals and allows for a seamless conversion into textual output making it relevant for applications like document management or digital archiving across industries such as healthcare, finance, and education. It is TII's first multimodal model and the only top-tier market model with this image-to-text conversion capability. An additional benefit: both Falcon 2 11B and Falcon 2 11B VLM can be operated on just one GPU, thus making them particularly scalable and easy to integrate into lighter infrastructures such as laptops and other devices. This means that Falcon 2 11B uses less compute power making it cheaper to run and more environmentally friendly.

c. Explain why the nominated product is unique or significant. If possible compare the product to competitors' offerings and/or to the organization's other or past products (up to 250 words). Required

The Falcon series of Large Language Models is the first LLM model from the Arab world that can match the comparable offerings of Western tech giants like Meta, Google, and Open AI. Every single release in the Falcon series has topped the open source leaderboard on Hugging Face's independent LLM rankings for its performance. The Falcon models are also publicly accessible because of the decision to open source the technology allowing every user transparent insight into the models and the underlying mechanisms. The customization of the entire series is supported by TII's own Falcon Foundation dedicated to advancing the development of open-source generative AI models and to build sustainable ecosystems around open-source projects. Seven companies from four countries have already signed the letter of intent to join, underlining TII's goal to enter strategic partnerships for the benefit of all. Tested against several prominent AI models in its class among pre-trained models, Falcon 2 11B surpasses the performance of Meta's Llama 3 with 8 billion parameters(8B), and performs on par with Google's Gemma 7B at first place (Falcon 2 11B: 64.28 vs Gemma 7B: 64.29). Within the first eight weeks, Falcon 2 had already been downloaded more than 85,000 times bringing the total number of downloads for all Falcon LLMs now amounts to more than 45 million.

d. Reference any attachments of supporting materials throughout this nomination and how they provide evidence of the claims you have made in this nomination (up to 250 words). Optional

Webpage Link

https://www.tii.ae/news/falcon-2-uaes-technology-innovation-institute-releases-new-ai-model-series-outperforming-metas (https://www.tii.ae/news/falcon-2-uaes-technology-innovation-institute-releases-new-ai-model-series-outperforming-metas)

Would you like to add an additional webpage link?

Yes

Webpage Link 2

https://huggingface.co/blog/falcon2-11b (https://huggingface.co/blog/falcon2-11b)

Would you like to add an additional webpage link?

Yes

Webpage Link 3

https://www.bloomberg.com/news/articles/2024-05-13/uae-releases-new-falcon-ai-model-11b-to-rival-meta-s-llama-openai-and-google?srnd=undefined&embedded-checkout=true (https://www.bloomberg.com/news/articles/2024-05-13/uae-releases-new-falcon-ai-model-11b-to-rival-meta-s-llama-openai-and-google?srnd=undefined&embedded-checkout=true)

Would you like to add an additional webpage link?

Yes

Web Page Link 4

https://www.reuters.com/technology/uae-releases-new-ai-model-compete-with-big-tech-2024-05 (https://www.reuters.com/technology/uae-releases-new-ai-model-compete-with-big-tech-2024-05)

Would you like to add an additional webpage link?

Yes

Web Page Link 5

https://x.com/BeckyCNN/status/1790040480387858933 (https://x.com/BeckyCNN/status/1790040480387858933)

Would you like to add an additional webpage link?

No

Supporting Document

No File Uploaded

Would you like to add an additional supporting document?

No

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Terms and Conditions

I Agree