∞ Meta

May 29, 2024

Meta Platforms, Inc.
1 Hacker Way
Menlo Park, CA 94025

The Hon. Shira L. Perlmutter
Register of Copyrights and Director of the US Copyright Office
US Library of Congress
101 Independence Ave SE
Washington, DC 20540

Re: Artificial Intelligence and Copyright, Notice of Inquiry and Request for Comment [Docket No. 2023-06]

Dear Ms. Perlmutter,

On May 21, 2024, the undersigned along with John Branscome, Dave Kumar, James Whymark, and Olena Ripnick-O'Farrell of Meta Platforms, Inc., met with the following Office personnel to discuss the launch of Meta Llama 3, innovative use cases building off Llama, and other new issues and developments since the Comment period in the above-captioned proceeding closed last Fall: Suzanne Wilson, Emily Chapuis, Nicholas Bartelt, Brandy Karl, Jason Sloan, Jalyce Mangum, and Michael Druckman from the Office of the General Counsel; Maria Strong, Andrew Foglia, Chris Weston, Emily Lanza, Danielle Johnson, Caitlin Costello, Jenée Iyer, and Ben Brady from the Office of Policy and International Affairs; and Heather Walters and Isaac Kilipstein, Copyright Fellows.

We discussed the launch of Meta Llama 3, the next generation of our state-of-the-art large language model, which, consistent with Llama 2, was publicly released via a bespoke open-source style license on April 18th. With Llama 3, Meta set out to build and make broadly available an open model that is on par with the best proprietary models available today, while continuing to play a leading role with respect to responsible use and deployment of LLMs. This release features pretrained and instruction-fine-tuned language models with 8B and 70B parameters[1] that can support a broad range of use cases. This next generation of Llama demonstrates state-of-the-art performance on a wide range of industry benchmarks and offers new capabilities, including improved reasoning.[2]

In support of our longstanding open approach, Meta put Llama 3 directly in the hands of the community. We have embraced the open source ethos of releasing early and often to enable

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[1] Note that parameters are the numeric values that determine the behavior of the large language model, while tokens are the basic unit of meaning such as a word or number. *See* https://primo.ai/index.php?title=Large_Language_Model_(LLM).
[2] More information about Llama 3 is available at https://ai.meta.com/blog/meta-llama-3/.

the community to access these models while they are still in development. Within just a week of release, the Llama 3 models were downloaded over 1.2 million times, with developers sharing over 600 derivative models on Hugging Face. With the release of our initial Llama 3 models, we wanted to kickstart the next wave of innovation in AI across the stack—from applications to developer tools to evals to inference optimizations and more—and we are already seeing developers do amazing things with Llama 3, in addition to continuing the innovations they have developed using previously-released models. Indeed, Meta recently hosted a Global Llama Community Summit featuring 70 developers from 27 countries who are innovating and creating value using the open Llama AI models.

As discussed in our meeting with the Office, we share some of these examples below to provide a snapshot of the different types of innovation that LLMs foster from organizations and researchers that may not be part of the copyright debate, but who would be impacted by any developments that stifle innovation in this space.

- **Meditron.** At Yale's School of Medicine, teams alongside the EPFL School of Computer and Communication Sciences fine-tuned Meta Llama 3 within 24 hours of release, introducing Llama-3[8B]-MeditronV1.0—the first fine-tuned Llama 3 8B for medicine. This new model outperforms all state-of-the-art open models within its parameter class on standard benchmarks such as MedQA and MedMCQA.[3]
- Researchers from Iowa State University, New York University, Carnegie Mellon, and the University of Arizona are using Llama as part of an **AI Institute For Resilient Agriculture (AIIRA)** project to build AI systems to help farmers identify and mitigate invasive insects.[4]
- **FoondaMate**,[5] a startup, is using Llama to build their AI study robot that provides help to over 3 million students with homework and studying via their WhatsApp-based platform in Sub-Saharan Africa and South Asia.
- **Pratham Education Foundation**,[6] an India-based non-profit focused on education, is using Llama to help young mothers answer questions about early childhood care and education.
- Researchers at Saama AI Labs fine-tuned Llama 3 to create **OpenBioLLM**, a free, state-of-the art biomedical-focused language model that can assist with common clinical tasks.[7]

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[3] More information about how Yale and the EPFL built their first version of Meditron on top of Llama 2 is available at https://ai.meta.com/blog/llama-2-3-meditron-yale-medicine-epfl-open-source-llm/; *see also* https://ggba.swiss/en/meditron-epfls-new-large-language-model-for-medical-knowledge/.
[4] https://www.news.iastate.edu/news/2024/05/06/aipests.
[5] https://foondamate.com/.
[6] https://www.pratham.org/.
[7] https://www.saama.com/introducing-openbiollm-llama3-70b-8b-saamas-ai-research-lab-released-the-most-openly-available-medical-domain-llms-to-date/.

- **Update on the Mayo Clinic:**[8] Mayo Clinic's pioneering RadOnc-GPT is a large language model (LLM) leveraging Meta Llama 2 that has the potential to significantly improve the speed, accuracy, and quality of radiation therapy decision-making, benefiting both medical practitioners and the patients they serve.[9]
  - It was fine-tuned on a large dataset of radiation oncology patient records from the Mayo Clinic in Arizona. No patient data was shared outside of a secure network since the model is trained locally using Llama 2 running a local GPU server.
  - "Properly fine-tuned, open source LLMs have immense potential to revolutionize radiation oncology and other highly specialized healthcare domains," says Dr. Wei Liu, Professor of Radiation Oncology and Research Director of Division of Medical Physics, Mayo Clinic in Arizona.
  - The immediate clinical use case for RadOnc-GPT is for patient follow-up. Liu's team plans to develop a chatbot to answer routine questions patients raise post-radiotherapy, reducing the workload of nurses and clinicians so they can focus on more prioritized work.
  - Future developments may include the expansion into additional clinical tasks, such as constructing models for predicting patient outcomes in radiation oncology. Furthermore, Liu says the team is considering leveraging the recently released and more advanced Llama 3 model to enhance its performance.

The Office also asked about Meta's position on a rightsholder opt-out from AI training, including with respect to the EU AI Act.. We noted that the opt-out requirement is a matter of substantial discussion in the EU, due to the EU AI Act, and we are a part of that conversation and supportive of solutions that are effective for everyone. Such solutions, however, are most effectively achieved through industry collaboration, which is indeed also now the focus of discussion in the EU.

This Office also asked us to share information about any public statements or commitments Meta has made following the AI Seoul Summit 2024, at which Meta signed on to the voluntary commitments outlined in the Frontier AI Safety Commitments linked to in the footnote below.[10]

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[8] This example was briefly referenced in our reply comments, *see* Reply Comments of Meta Platforms, Inc., USCO Docket No. 2023-06, at 9 n.47 (filed Dec. 6, 2023), and we have included more information and updates herein.

[9] *See* https://ai.meta.com/blog/radonc-gpt-meta-llama-2-mayo-clinic/; *see also* Liu et al, RadOnc-GPT: A Large Language Model for Radiation Oncology, *at* https://arxiv.org/abs/2309.10160.

[10] *See* https://www.gov.uk/government/publications/frontier-ai-safety-commitments-ai-seoul-summit-2024/frontier-ai-safety-commitments-ai-seoul-summit-2024.

We appreciate the time and expertise of your staff. We know that these are extremely thorny but important issues. We hope that we can continue to serve as a useful resource as your work in this space progresses.

Sincerely,

Elizabeth L. Kendall
Director, Media and IP Policy