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23 *(continues on signature page)*

24 **UNITED STATES DISTRICT COURT**
25 **NORTHERN DISTRICT OF CALIFORNIA**
26 **SAN FRANCISCO DIVISION**

27 **Jingna Zhang**, an individual;
28 **Sarah Andersen**, an individual;
Hope Larson, an individual; and
Jessica Fink, an individual;

Individual and Representative Plaintiffs,

v.

Google LLC, a Delaware limited liability company; and
Alphabet Inc., a Delaware corporation;

Defendants.

Case No.

COMPLAINT

CLASS ACTION

DEMAND FOR JURY TRIAL

1 Plaintiffs Jingna Zhang, Sarah Andersen, Hope Larson, and Jessica Fink (together “Plaintiffs”),
2 on behalf of themselves and all others similarly situated, bring this class-action complaint
3 (“Complaint”) against defendants Google LLC (“Google”) and Alphabet Inc. (“Alphabet”) (together
4 “Defendants”).

6 OVERVIEW

7 1. *Artificial intelligence*—commonly abbreviated “AI”—denotes software that is designed
8 to algorithmically simulate human reasoning or inference, often using statistical methods.

9 2. Imagen is an AI software product created, maintained, and sold by Google. Imagen is a
10 *text-to-image diffusion model*. A text-to-image diffusion model takes as input a short text description of
11 an image (also known as a *text prompt*) and then uses a machine-learning technique called *diffusion* to
12 generate an image in response to the prompt.

13 3. Rather than being programmed in the traditional way—that is, by human programmers
14 writing code—a diffusion model is *trained* by copying an enormous quantity of digital images with
15 associated text captions, extracting protected expression from these works, and transforming that
16 protected expression into a large set of numbers called *weights* that are stored within the model. These
17 weights are entirely and uniquely derived from the protected expression in the training dataset.
18 Whenever a diffusion model generates an image in response to a user prompt, it is performing a
19 computation that relies on these stored weights, with the goal of imitating the protected expression
20 ingested from the training dataset.

21 4. Training a model first requires amassing a huge corpus of data, called a *dataset*. The AI
22 models at issue in this complaint were trained on datasets containing millions of images paired with
23 descriptive captions. In this complaint, each image–caption pair is called a *training image*. During
24 training of the model, the training images in the dataset are directly copied in full and then completely
25 ingested by the model, meaning that protected expression from every training image enters the model.
26 As it copies and ingests billions of training images, the model progressively develops the ability to
27 generate outputs that mimic the protected expression copied from the dataset.

1 5. Plaintiffs and Class members are visual artists. They own registered copyrights in
2 certain training images that Google has admitted copying to train Imagen. Plaintiffs and Class members
3 never authorized Google to use their copyrighted works as training material.

4 6. These copyrighted training images were copied multiple times by Google during the
5 training process for Imagen. Because Imagen contains weights that represent a transformation of the
6 protected expression in the training dataset, Imagen is itself an infringing derivative work.

7 7. Alphabet, as the corporate parent of Google, also commercially benefits from these acts
8 of massive copyright infringement.

9 10 **JURISDICTION AND VENUE**

11 8. This Court has subject-matter jurisdiction under 28 U.S.C. § 1331 because this case
12 arises under the Copyright Act (17 U.S.C. § 501).

13 9. Jurisdiction and venue are proper in this judicial district under 28 U.S.C. § 1391(c)(2)
14 because Defendants are headquartered in this district. Google created the Imagen model and, in
15 cooperation with Alphabet, distributes it commercially. Therefore, a substantial part of the events
16 giving rise to the claim occurred in this District. A substantial portion of the affected interstate trade
17 and commerce was carried out in this District. Defendants have transacted business, maintained
18 substantial contacts, and/or committed overt acts in furtherance of the illegal scheme and conspiracy
19 throughout the United States, including in this District. Defendants' conduct has had the intended and
20 foreseeable effect of causing injury to persons residing in, located in, or doing business throughout the
21 United States, including in this District.

22 10. Under Civil Local Rule 3-2(c), assignment of this case to the San Francisco Division is
23 proper because this case pertains to intellectual-property rights, which under General Order No. 44 is
24 deemed a district-wide case category, and therefore venue is proper in any courthouse in this District.

25 26 **PLAINTIFFS**

27 11. Plaintiff Jingna Zhang is a photographer who lives in Washington.

28 12. Plaintiff Sarah Andersen is a cartoonist and illustrator who lives in Oregon.

1 13. Plaintiff Hope Larson is a cartoonist and illustrator who lives in North Carolina.

2 14. Plaintiff Jessica Fink is a cartoonist and illustrator who lives in New York.

3 15. A nonexhaustive list of registered copyrights owned by Plaintiffs is included as
4 **Exhibit A: Plaintiff Copyright Registrations**. A nonexhaustive list of copyrighted images registered
5 by Plaintiffs and infringed by Defendants is included as **Exhibit B: Plaintiff Images in LAION-400M**.

6 16. The images shown in Exhibit B are offered as a representative sample of works by
7 Plaintiffs that appear in the LAION-400M dataset—not an exhaustive or complete list. Plaintiffs
8 confirmed that these particular images were in the LAION-400M dataset by searching for their own
9 names on two websites that allow searching of the LAION datasets: <https://haveibeenentrained.com> and
10 <https://rom1504.github.io/clip-retrieval/>. On information and belief, all of Plaintiffs' works that were
11 registered as part of the collections in Exhibit A and were online were scraped into the LAION-400M
12 dataset.

13 14 DEFENDANTS

15 17. Defendant Google LLC is a Delaware limited liability company with its principal place
16 of business at 1600 Amphitheatre Parkway, Mountain View CA 94043.

17 18. Defendant Alphabet Inc. is a Delaware corporation with its principal place of business at
18 1600 Amphitheatre Parkway, Mountain View CA 94043. In 2015, Google became a subsidiary of
19 Alphabet.

20 21 AGENTS AND CO-CONSPIRATORS

22 19. The unlawful acts alleged against the Defendants in this Complaint were authorized,
23 ordered, or performed by the Defendants' respective officers, agents, employees, representatives, or
24 shareholders while actively engaged in the management, direction, or control of the Defendants'
25 businesses or affairs. The Defendants' agents operated under the explicit and apparent authority of
26 their principals. Each Defendant, and its subsidiaries, affiliates, and agents operated as a single unified
27 entity.
28

20. Various persons or firms not named as defendants may have participated as co-conspirators in the violations alleged herein and may have performed acts and made statements in furtherance thereof. Each acted as the principal, agent, or joint venture of, or for other Defendants with respect to the acts, violations, and common course of conduct alleged herein.

FACTUAL ALLEGATIONS

21. Google is a diversified technology company whose lines of business include internet advertising and cloud-computing services. As part of these businesses, Google creates and distributes artificial-intelligence software products.

22. One such product is Imagen, a text-to-image diffusion model that takes as input a short text description of an image and then uses AI techniques to generate an image in response to the prompt.

23. In May 2022, Google announced Imagen in a paper called “Photorealistic Text-to-Image Diffusion Models with Deep Language Understanding.”¹ In the paper, Google admits that it trained Imagen on “the publicly available Laion [sic] dataset ... with \approx 400M image-text pairs.”²

24. Initially, Google did not release Imagen to the public. Google explained its reasoning on the website for Imagen: “the data requirements of text-to-image models have led researchers to rely heavily on large, mostly uncurated, web-scraped datasets ... we also utilized LAION-400M dataset which is known to contain a wide range of inappropriate content including pornographic imagery, racist slurs, and harmful social stereotypes ... As such, there is a risk that Imagen has encoded harmful stereotypes and representations, which guides our decision to not release Imagen for public use without further safeguards in place.”³

25. LAION-400M also contains copyrighted works owned by Plaintiffs and the Class, including those in Exhibit B.

¹ Available at <https://arxiv.org/abs/2205.11487>

² *Id.* at 7.

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