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19 SATRAJIT CHATTERJEE

20 SUPERIOR COURT OF CALIFORNIA

21 COUNTY OF SANTA CLARA

22 Satrajit Chatterjee,

23 Plaintiff,

24 v.

25 Google, Inc.,

26 Defendant

27 Case No.: 22CV398683

28 **VERIFIED FIRST AMENDED
COMPLAINT FOR DAMAGES AND
DEMAND FOR JURY TRIAL**

*[Assigned for All Purposes Hon. Peter
Kirwan, Dept. 19]*

29 6. Violation of Labor Code Section 1102.5
30 7. Wrongful Termination in Violation of
31 Public Policy

32 Action Filed: May 6, 2022
33 Trial Date: TBD

34 **CASE OVERVIEW**

35 Dr. Satrajit Chatterjee was a well-respected senior researcher and manager for Google
36 until he blew the whistle on the company's fraudulent statements claiming to have revolutionized

1 a method for designing the physical layout of computer chips, in a project founded and overseen
2 by Jeff Dean, the Head of Google's Research division and a direct report to the CEO Sundar
3 Pichai. Google stated that "despite five decades of research," chip design had "defied
4 automation." Google claimed to have solved that problem by harnessing artificial intelligence to
5 automate generating chip floorplan designs, with "superhuman" results that were vastly superior
6 to existing floor plan designs. These claims were fraudulent, however, because Google was aware
7 of considerable amounts of experimental data that undermined these claims and of limitations in
8 key experiments where Google had extensively customized its algorithms for each individual
9 design while failing to properly configure or correctly install competing tools, effectively –
10 perhaps deliberately – rigging the results in Google's favor. Neither the data, Google's
11 customizations, nor the limitations were clearly disclosed. Following the course of conduct
12 prescribed by Google's Code of Conduct ("don't stay silent"), Dr. Chatterjee raised his concerns
13 to Google, including his reasonable belief that Google's public statements, unless corrected,
14 violated the law and were fraudulent. Dr. Chatterjee expressly complained that Google's
15 statements were fraudulent to shareholders and to third parties, including one with whom Google
16 was discussing a cloud computing deal in excess of \$100 million. After it became evident that
17 Dean was not going to cure Google's fraud, Dr. Chatterjee stated he would raise the issue with
18 Alphabet CEO Sundar Pichai and the Board of Directors. **Google terminated Chatterjee within**
hours.

20 Remarkably, Google admitted in a declaration filed in this action that it disciplined and
21 subsequently terminated Dr. Chatterjee for raising concerns about fraud. Google nonetheless
22 seeks to evade responsibility for its brazenly illegal termination of a whistleblower. But Google's
23 vast power and fortune does not make it above the law.

24 **PARTIES AND JURISDICTION**

25 1. Defendant GOOGLE, LLC ("Defendant") is a limited liability company with its
26 principal place of business at 1600 Amphitheatre Parkway, Mountainview, California. Google,
27 LLC is a subsidiary of Alphabet, Inc., which is a public company. Defendant was erroneously
28 sued as GOOGLE, INC. in the original complaint initiating this action. GOOGLE, LLC has

1 | appeared in this action.

2 2. Plaintiff SATRAJIT CHATTERJEE (“Plaintiff” or “Dr. Chatterjee”) is a natural
3 person who resides in Palo Alto, California.

4 3. Venue and jurisdiction are proper because the majority of the events giving rise to
5 this action took place in Santa Clara County; Defendant was doing business in Santa Clara
6 County; Plaintiff's employment was entered into in Santa Clara County; Plaintiff worked for
7 Defendant in Santa Clara County; the damages sought exceed the jurisdictional minimum of this
8 Court; and because the majority of witnesses and events occurred in Santa Clara County.

STATEMENT OF FACTS

10 4. Prior to becoming employed at Google, Plaintiff obtained a Ph.D. in Computer
11 Science from the University of California, Berkeley, specializing in electronic design automation
12 for chip design. He then worked in the semiconductor industry (Intel) and in the financial services
13 industry. Dr. Chatterjee also developed expertise in machine learning.

14 5. Due to Dr. Chatterjee's training and experience, Google repeatedly tried to recruit
15 him. Google made an offer of employment to Dr. Chatterjee in 2010 that he declined. From 2011
16 to 2018, Google recruiters continued to contact him at least once a year.

17 6. In or about June 2018, Google established its principles for artificial intelligence
18 (“AI Principles”), which are publicly available at <https://ai.google/principles/>.¹ In these AI
19 Principles, Google promised the public, shareholders, competitors, and actual or potential
20 business partners that it would “Uphold high standards of scientific excellence.” “Technological
21 innovation is rooted in the scientific method and a commitment to open inquiry, intellectual rigor,
22 integrity, and collaboration. AI tools have the potential to unlock new realms of scientific research
23 and knowledge in critical domains like biology, chemistry, medicine, and environmental sciences.
24 We aspire to high standards of scientific excellence as we work to progress AI development.”

²⁵ 7. In a blog post² on June 7, 2018, Alphabet, Inc. and Google CEO Sundar Pichai

²⁷ Plaintiff does not allege that the AI Principles (and Defendant's failure to abide by them) constituted an
²⁸ adverse employment action.

² Plaintiff does not allege that the blog post (and Defendant's failure to abide by it) constituted an adverse employment action.

1 wrote that the AI Principles “are not theoretical concepts; they are concrete standards that will
2 actively govern our research and product development and will impact our business decisions.”

3 8. Moreover, Google promised the public, shareholders, competitors, and actual or
4 potential business partners in its Code of Conduct “that everything we do in connection with our
5 work at Google will be, and should be, measured against the highest possible standards of ethical
6 business conduct” since “[o]ur commitment to the highest standards helps us hire great people.”³
7 Reinforcing that this was a *promise* to shareholders, the Conduct of Conduct was (and still is as
8 of the date of this First Amended Complaint) published on the Alphabet Investor Relations
9 website. See <https://abc.xyz/investor/other/google-code-of-conduct/>.

10 9. In the Code of Conduct, Alphabet promised its actual and potential shareholders,
11 “Google aspires to be a different kind of company. It’s impossible to spell out every possible
12 ethical scenario we might face. Instead, we rely on one another’s good judgment to uphold a high
13 standard of integrity for ourselves and our company. We expect all Googlers to be guided by both
14 the letter and the spirit of this Code. And remember... don’t be evil, and if you see something that
15 you think isn’t right – speak up!”

16 10. Dr. Chatterjee became employed by Google on or about September 23, 2018. He
17 was hired into Google’s “Research” division as a “Senior Engineering Manager”, which is a Level
18 7 position.

19 11. When Dr. Chatterjee was first hired at Google, Tomas Izo was his supervisor.
20 Plaintiff subsequently joined Anand Babu’s team called “Kernel”, which was also in the Research
21 Division. Plaintiff began working in Kernel in or about November 2019.

22 12. Babu was Plaintiff’s direct supervisor until Babu left Google in or about April
23 2021, at which time Senior Director Rahul Sukthankar became Plaintiff’s direct supervisor.
24 Sukthankar reported to Vice President Jay Yagnik, who reported directly to Jeff Dean, Google’s
25 Vice President of Research. Dean reported directly to CEO Sundar Pichai.

26 13. Google’s formal evaluations of Dr. Chatterjee stated that he maintained the
27

28 ³ Plaintiff does **not** allege that the publication of the Code of Conduct or Defendant’s failure to abide by it
constituted adverse employment actions.

1 “perfect balance” between “brilliant technical contributor and a leader to other people,” that he
2 was “very considerate, empathetic, and approachable as a people manager”, and made “significant
3 contributions” to DEI (Diversity Equity Inclusion) in Yagnik’s DEI Accountability Working
4 Group.

5 14. The lowest evaluation that Dr. Chatterjee received as a manager while employed
6 at Google was 91% favorable.

7 15. At all times during his employment, Dr. Chatterjee received “meets” or “exceeds”
8 expectations in his performance reviews.

9 16. Plaintiff alleges, based upon information and belief, that at all relevant times
10 during his employment, Google considered Dr. Chatterjee to be an excellent employee.

11 **Dr. Chatterjee’s Involvement in Project “Circuit Training” aka “Morpheus”**

12 17. On the Kernel team, a core part of Dr. Chatterjee’s duties was to evaluate the
13 potential commercial use of Google’s “Circuit Training” research project, otherwise known as
14 project “Morpheus.”

15 18. Google’s “Circuit Training” research project involved using “Deep Reinforcement
16 Learning” methods (“DRL-CT”) to improve chip placement. There are many other methods for
17 chip placement including “mixed size placement” methods and methods based on “simulated
18 annealing.” If DRL-CT were superior to these methods, it would have significant potential
19 commercial value and help Google’s Cloud division establish a competitive advantage over
20 competitors such as Amazon Web Services and Microsoft Azure and among customers in the
21 semiconductor and electronic design automation industries.

22 19. To commercialize Google’s DRL-CT methods for chip placement by partners and
23 third parties, Google needed to validate DRL-CT’s purported superiority over competing methods
24 for chip placement.

25 20. Plaintiff, one of his direct reports on the Kernel team, and other Google employees
26 were tasked with running experiments to evaluate DRL-CT against competing methods for chip
27 placement. The goal of these experiments was to validate DRL-CT’s superiority over competing
28 methods. However, the experiments ran by Kernel did not show that DRL-CT outperformed other

1 methods.

2 21. On or about April 22, 2020, Google released a paper regarding DRL-CT titled
3 “Chip Placement with Deep Reinforcement Learning” (hereinafter the “arXiv” paper).⁴ Dean was
4 the most senior employee listed as an author in the paper.

5 22. In the abstract to the paper, Google boasts “we show that, in under 6 hours, our
6 method can generate placements that are superhuman or comparable on modern accelerator
7 netlists, whereas existing baselines require human experts in the loop and take several weeks.”
8 However, the ArXiv paper did not include any comparisons on public or externally reproducible
9 benchmarks, commercially available tools, or other methods of placement such as simulated
10 annealing or “mixed-size” placement.

11 23. Prior to the arXiv paper, Dr. Chatterjee had suspicions about the results of the
12 work being performed by the Morpheus team, which was boasting that DRL-CT was besting
13 commercial tools in experiments. For example, a member of the Morpheus team had privately
14 told Dr. Chatterjee in early 2020 that simulated annealing, a classical method for placement, was
15 beating DRL-CT, but the lead researchers on the team, Anna Goldie and Azalia Mirhoseini, did
16 not want to acknowledge that. (Plaintiff alleges, based upon information and belief, that simulated
17 annealing was in fact beating DRL-CT in experiments as of early 2020 and Goldie and Mirhoseini
18 refused to acknowledge such.) But at that point in time in early 2020, Dr. Chatterjee had not yet
19 formed the belief that Google was violating the law.

20 24. In the course of the summer of 2020, the Kernel team conducted more
21 experiments. The results of these experiments were not consistent with the claim of “superhuman”
22 superiority in the arXiv paper. Dr. Chatterjee gradually formed the belief that the core claims
23 made in the arXiv were false and fraudulent, in violation of state and/or federal statutes. Dr.
24 Chatterjee believed that the core claims in the ArXiv paper were fraudulent on at least three levels.
25 **First**, Google and a third party electronic design automation company, “Company S”⁵, were
26 discussing a potential \$120 million cloud computing deal. Dr. Chatterjee was concerned that the

28 ⁴ Plaintiff does not allege that the arXiv paper or any fraudulent representations or omissions contained in
it constituted an adverse employment action.

29 ⁵ A pseudonym is used in place of the company’s real name throughout this First Amended Complaint.

1 claims in the arXiv paper could fraudulently induce Company S to reach a deal with Google out
2 of fear that it would be at a severe competitive disadvantage without Google's supposedly
3 revolutionary DRL-CT technology. **Second**, Google is part of one of the most valuable and
4 prominent companies in the world, Alphabet, Inc. The scientific community, competitors, and
5 investors all pay careful attention to Google's research and development. Particularly, advanced
6 chip design capability would be a strong competitive advantage for Google in reducing its
7 infrastructure costs versus other cloud providers such as Amazon AWS and Microsoft Azure and
8 in the competitiveness of its cellphone and other consumer products versus Apple. Dr. Chatterjee
9 was concerned that overstating DRL-CT could fraudulently influence Alphabet's stock price in
10 violation of securities laws and federal and state laws criminalizing fraud. (This theory of fraud
11 is commonly referred to as fraud-on-the-market theory.) **Third**, the arXiv paper also broke
12 Google's promises to shareholders contained in its AI Principles and Code of Conduct because
13 the Morpheus team was using a deeply flawed experimental protocol that was not clearly
14 disclosed in the arXiv paper. Dr. Chatterjee, who is not a lawyer and does not have a law degree,
15 reasonably and in good faith believed that these broken promises to shareholders violated
16 securities laws and federal and state laws criminalizing fraud.⁶

17 **Dr. Chatterjee Blows The Whistle On Fraudulent Claims In The arXiv Paper**

18 25. In the summer and fall of 2020, Dr. Chatterjee worked internally within Google to
19 attempt to cure Google's fraud by seeking to publish data⁷ that provided a more complete picture.
20 In the course of so doing (and as will be described in more detail below), Dr. Chatterjee disclosed
21 information that he had reasonable cause to believe disclosed violations of or noncompliance with
22 state and federal statutes to persons with authority over him and persons with authority to
23 investigate, discover, or correct violations or noncompliance of state and federal statutes
24 (hereinafter persons with such authority are referred to as "superiors" in the plural or "superior"

25
26 ⁶ Relevant state and federal statutes include, but are not limited to: Cal. Corp. Code § 25401 (securities
27 fraud); Cal. Penal Code § 484 (deceit or fraud); Cal. Penal Code § 532 (theft by false pretenses); Cal. Penal
28 Code §§ 182-185 (conspiracy); 8 U.S.C. § 1341 (mail fraud); 18 U.S.C. § 1343 (wire fraud); 8 U.S.C. §
1348 (securities fraud); 18 U.S.C. § 1349 (attempt or conspiracy).

7 Plaintiff does not allege that Google's refusal to publish any of his papers or the Kernel team's findings
somehow constituted an adverse employment action.

1 in the singular).

2 26. As will be described in more detail, Dr. Chatterjee also disclosed to superiors
3 information regarding the retaliation that his subordinates suffered for attempting to cure the
4 fraudulent statements contained in the arXiv paper and/or refusing to participate in the fraud.
5 These disclosures were also legally protected because Dr. Chatterjee had reasonable cause to
6 believe that the retaliation these subordinates suffered violated state and federal whistleblower
7 protection laws.

8 27. In or about the summer of 2020, Dr. Chatterjee and the Kernel team internally
9 published a slide deck containing the team's findings titled, "Takeaways and Notes on the Auto-
10 placer Benchmarking Study" (the "Takeaways deck"). (Dr. Chatterjee later provided a copy of
11 the Takeaways deck to Dean, who, Plaintiff alleges, based upon information and belief, was a
12 person with authority over him and a person with authority to investigate, discover, or correct
13 violations of state and federal law. Plaintiff alleges, based upon information and belief, that Babu
14 also provided the Takeaways deck to Dean.)

15 28. The Takeaways deck summarized the results of the Kernel team's experiments,
16 which were contrary to Google's claims in the arXiv paper. The Takeaways deck concluded,
17 "Modern commercial macro auto-placers such as Cadence CMP and [product from Company S]
18 are competitive with Morpheus (and can beat manual floorplans in cases). [¶] This makes it more
19 challenging to justify build-vs-buy of Morpheus beyond a research tool."

20 29. The Takeaways deck recommended that Google "communicate to [Company S]
21 that their tool is competitive with Morpheus and others that we have tried. [¶] Therefore, we are
22 deciding not to pursue productionalization with them at this time, but may revisit in the future as
23 the research evolves."

24 30. The Takeaways deck noted several methodological flaws with the Morpheus
25 studies to date, which Google has never publicly disclosed (and were not disclosed in a subsequent
26 paper in the journal *Nature*). For example, two of the tools that DRL-CT was compared against,
27 from Company S and Cadence, were not installed or optimized by the respective vendors, which
28 is inconsistent with industry practice. More than a third of Cadence CMP flows were not able to

1 complete, i.e., failed. Rather than investigate the issue further (which may have revealed, for
2 example, that the tool was not properly installed), the Morpheus team simply concluded that DRL-
3 CT beat Cadence CMP in that run.

4 31. Another methodological flaw exposed in the Takeaways deck (a flaw that Google
5 has never publicly disclosed, including in the later *Nature* paper) was that the Morpheus team
6 used default configurations for the Cadence and Company S tools. However, the Morpheus team
7 extensively customized the algorithms, cost functions, post-processing, and hyper parameters of
8 Morpheus for each design. (At best, these customizations unintentionally biased the experiments
9 in Google's favor. At worst, the customizations were a deliberate effort to rig the experiments in
10 Google's favor. Either way, the customizations were not clearly disclosed and the authors knew
11 or should have known this was a material omission that created a misleading impression to
12 business partners and actual or potential shareholders.)

13 32. Correcting for the above (and other) methodological flaws, the experiments by the
14 Kernel team found the results for DRL-CT were decidedly mixed – a far cry from “superhuman”
15 or revolutionary.

16 33. By publishing the Takeaways deck internally to Dean and other superiors, Dr.
17 Chatterjee disclosed information which he had reasonable cause to believe disclosed a violation
18 of state and federal law because it undermined the core claims in the arXiv paper, as explained
19 earlier.

20 34. Furthermore, by publishing the Takeaways deck (which recommended informing
21 Company S that its tool was competitive with Morpheus, to avoid defrauding Company S), Dr.
22 Chatterjee refused to engage in conduct that would have resulted in a violation of a state or federal
23 statute.

24 35. Plaintiff alleges, based upon information and belief, that Google perceived the
25 Takeaways deck as Dr. Chatterjee refusing to engage in conduct that would result in violations of
26 a state or federal statute.

27 //
28 //

1 36. Dr. Chatterjee's belief that Google was defrauding (or attempting to defraud)
2 shareholders and Company S was bolstered by emails exchanged between two of the lead
3 researchers on the Morpheus team, Goldie and Mirhoseini, and Dr. Chatterjee's supervisor at that
4 time, Babu. The emails, which Babu shared with Chatterjee in September 2020, show in
5 unmistakable terms that Goldie and Mirhoseini were aware that 1) they were overstating DRL-
6 CT and 2) deliberately withholding material information from Company S to induce it to sign a
7 cloud computing deal.

8 37. In the emails, Babu, Goldie, and Mirhoseini discussed a request by Company S for
9 data from the Morpheus experiments. At 5:59 p.m. on September 1, 2020, Babu wrote, "Two
10 things that are important for us to make clear are (a) what we have is not yet a universal win
11 across blocks (i.e. [Company S]+cdn got almost as many 1st place wins as morpheus) – and (b)
12 that there's still work to do on generalization v. typical EDA productization."

13 38. At 6:28 p.m. that same day, Goldie responded (with emphasis added), "We don't
14 actually have evidence that Morpheus does or does not generalize beyond [blocks from Google's
15 machine learning accelerators], so it seems safest not to make claims either way, since our goal
16 is to build/maintain trust with [Company S]. I thought your original statement ("overall Morpheus
17 compared favorably to [a placement tool from Company S]") seemed reasonable, so maybe we
18 could just stick with that? If we say that we do not wish to focus on productionizing Morpheus
19 at this point, [Company S] will naturally assume that Morpheus doesn't compare *that*
20 favorably, so maybe that's enough to close out this thread. :)"

21 39. At 6:52 p.m., that same day, Babu responded, "Stepping back, one important thing
22 to keep in mind is that [Company S] (and others in the industry) see sometimes hyped press
23 coverage about our research and then extrapolate. So often their starting point is 'those folks at
24 google have figured out the recipe to disrupt our entire Industry and they are holding it back for
25 their own gain'. So they are actually naturally inclined to assume that we have the crown jewels
26 and we're holding them back for some reason." (This statement, in particular, bolstered Dr.
27 Chatterjee's concerns about fraud toward shareholders and Company S.)

28 //

1 40. Babu later stated in the same email, “So as one example – if we haven’t yet proved
2 that Morpheus can generalize (totally understandable), we should be clear about that – since
3 ultimately that is a critical precursor for an EDA company that has to support 1000s of chip starts
4 across all kinds of customer workflows, etc.”

5 41. Babu subsequently forwarded the thread to Dr. Chatterjee for his input regarding
6 Goldie’s suggested response to [Company S]. At 10:39 p.m., on September 1, 2020, Dr.
7 Chatterjee wrote (with emphasis in the original), “I worry that this says that all is well with
8 Morpheus and we should move to Phase 2 of the collaboration where now we get additional
9 designs from [Company S] (to test generalization) and do the comparisons on that broader set. So
10 I totally wouldn’t send this since it sends the exact opposite message. We **have** to convey that
11 Phase 1 did not pass the gating condition to move to Phase 2.”

12 42. Later in the same email, Chatterjee wrote, “Alternatively, earlier she said ‘they
13 will infer that Morpheus is not that much better’, so how about we say that explicitly (i.e. back to
14 some version of Morpheus not having an overwhelming advantage)?”

15 43. In writing the aforementioned email of September 1, 2020, Dr. Chatterjee
16 disclosed information to a superior which he had reasonable cause to believe disclosed a violation
17 of state or federal law, attempted fraud of [Company S]. The email also constituted a refusal to
18 participate in acts that would have resulted in a violation of state and federal law.

19 44. In a subsequent email in the thread between Chatterjee and Babu at 11:01 p.m., on
20 September 1, 2020, Babu questioned why the ArXiv paper did not include data comparing
21 Morpheus DRL-CT with simulated annealing and shared his concern that the data was being
22 withheld from Company S so that Google could close a cloud computing deal. “I skimmed the
23 RL vs SA doc. Do you recall what their stated reason was for not including this in their paper?
24 On sharing with [Company S] (assuming Richard signs off), what’s the upside? Could this
25 somehow strengthen our partnership in cloud? Does this answer meaningful research questions
26 for them?” Babu’s concerns further bolstered Dr. Chatterjee’s concern that Google was violating
27 state and federal law by attempting to defraud Company S.

28 //

1 45. Dr. Chatterjee responded to Babu at 11:26 p.m., on September 1, 2020. The email
2 stated, in relevant part:

3 Yes, generalization is key but we could be making two statements (conveying
4 two very different impressions) regarding generalization:

5 (a) Our generalization tests so far have been successful ("we always beat [a
6 placement tool from Company S] on whatever new thing we throw at it"), but
7 we don't know what the next 1000 cases will bring.

8 (b) Our generalization so far has been lacking ("we know we don't do as well as
9 [a placement tool from Company S] on some designs").

10 A2⁸] want us to say (a) but conveying that to [Company S] means Phase 1 was
11 successful, and it's time to move on to Phase 2 with the big library of [Company
12 S] designs.

13 Conveying (b) means Phase 1 was not successful and so no point moving on to
14 Phase 2.

15 Therefore it is important that we convey (b) which is reality and not (a).

16 46. In writing the aforementioned email, Dr. Chatterjee disclosed information to a
17 superior which he had reasonable cause to believe disclosed a violation of a state or federal statute,
18 Google's attempt to defraud Company S. This email also constituted a refusal by Dr. Chatterjee
19 to participate in acts that would have resulted in a violation of a state or federal statute.

20 47. The next day, September 2, 2020, Dr. Chatterjee emailed Babu:

21 Thinking about this fresh, I think we need to reset with A2 here on the BS and
22 convey straightforwardly what we learnt from the study. I really like the direction
23 you started yesterday:

24 From our study we found that:

25 (a) Morpheus won some blocks and [a placement tool from Company S]
26 won some blocks.

27 (b) On the blocks Morpheus won, [a placement tool from Company S]
28 results were competitive.

As a result we do not think that the current state of RL has sufficient improvement over [a placement tool from Company S] that it is worth

⁸ A2 is an acronym that refers to Anna Goldie and Azalia Mirhoseini.

1 investing more in commercialization (given all the complexities, additional
2 features, etc.). Instead we are focussing on basic research.

3 This study was not so much about generalization, so we can just not talk about it,
4 and keep our assessment simple and in line with the results.

5 WDYT?

6 Sat

7 48. In writing the aforementioned email, Dr. Chatterjee disclosed information to a
8 superior which he had reasonable cause to believe disclosed a violation of state or federal statute.
9 This email also constituted a refusal by Dr. Chatterjee to participate in acts that would have
resulted in a violation of a state or federal statute.

10 49. In or about October 2020, Plaintiff expressly raised concerns orally to Babu,
11 Sukthankar, and Richard Ho, a principal engineer, that Google **could be charged with fraud** if
12 it continued to represent DRL-CT as being superior to competing methods for chip placement to
13 a third party or partner for commercial agreements. By expressly using the word fraud, Dr.
14 Chatterjee disclosed information to superiors which he had reasonable cause to believe disclosed
15 a violation of a state or federal statute.

16 50. On October 13, 2020, Dr. Chatterjee sent Dean, Goldie, Azalia, Babu, and others
17 a summary of the results from the Kernel team's experiments comparing reinforcement learning
18 with simulated annealing, a classical approach to placement optimization within the Morpheus
19 system. These ablation experiments were designed to correct for confounding factors in previous
20 studies, which had (either intentionally or unintentionally) biased the results in Google's favor.
21 Dr. Chatterjee, in more diplomatic terms, explained the methodological differences employed by
22 Kernel. Dr. Chatterjee then wrote:

23 Our main findings are:

24 A. SA seems to reliably outperform RL, GRL and Random. Random does the worst
25 but provides a natural scale to judge how well the other algorithms are doing.

26 B. GRL does better than RL (though note that we did not control for
27 memorization/overfitting and simple regurgitation of optimal solutions computed
28 during training; we have some ideas on how to do that but that would be future
work).

1 51. The October 13, 2020 email also included a link to the full report.

2 52. In writing the aforementioned email and linking to the report, Dr. Chatterjee
3 disclosed information to superiors which he had reasonable cause to believe disclosed a violation
4 of a state or federal statute, i.e. that the core claims of ArXiv were fraudulent for the reasons
5 discussed earlier in this Complaint.

6 53. Despite knowledge of data discussed earlier which undermined the core claims of
7 the arXiv paper, in November 2020, Google submitted a version of the arXiv paper on DRL-CT
8 to the prestigious journal *Nature*. Plaintiff alleges, based upon information and belief, that Google
9 did not share the data from the Kernel team with the reviewers at *Nature*. Nor did Google disclose
10 to *Nature* the sharp internal disagreement within Google about the claims being made by the
11 Morpheus team. The contrary data was not disclosed in the paper that was ultimately published.⁹

12 54. Google did not submit the *Nature* paper through its customary internal publication
13 review process (“pubapprove”) before submitting it to *Nature*.¹⁰

14 55. Dr. Chatterjee was not aware of the November 2020 submission of the *Nature*
15 paper at the time. He did not learn about the paper until it was published on June 9, 2021.

16 56. In November 2020, Dr. Chatterjee distributed a memorandum to Sukthankar,
17 Babu, Vice President of Product Management Eli Collins, Vice President of Google Brain Megan
18 Kacholia, Senior Director of Google Brain Samy Bengio, and Quoc Le, the direct supervisor of
19 Goldie and Mirhoseini.

20 57. The memorandum stated at its outset, “There have been concerns raised by several
21 members of the Morpheus team over the course of this year that the core claim of Morpheus (that
22 RL outperforms existing algorithms) is simply not true.”

23 //

24 //

25
26

⁹ Plaintiff does not allege that Google’s decision to publish the *Nature* paper and subsequent refusal to
27 retract or cure the fraudulent statements contained in it somehow constituted an adverse employment
28 action. Likewise, Plaintiff does not allege that any of Google’s representations or omissions to reviewers
at *Nature* constituted an adverse employment action.

¹⁰ Plaintiff does not allege that Google’s failure to follow its customary internal publication review process
somehow constituted an adverse employment action.

1 58. The memorandum notes, “attempts to share these concerns directly with Anna and
2 Azalia have not succeeded, and in fact, have been met with extreme hostility (though perhaps less
3 so on Azalia’s part than on Anna’s). Rather than being open to the issues being pointed out, and
4 working constructively to address them, the concerns are dismissed by a combination of (a)
5 turning the team member into an outsider, (b) engaging in bad-faith discussions to block progress
6 in endless back-and-forth (often on tangential issues), and (c) by escalation to senior Brain
7 leadership. Note that all 3 techniques are being employed at present.”

8 59. The memorandum continued, “(c) is particularly concerning due to Jeff’s
9 involvement. He is Morpheus’ most public-facing champion, his perceived involvement and
10 support for the project, and perceived close personal relationship with Anna and Azalia serves as
11 an effective deterrent for most people on the project who choose to remain quiet rather than risk
12 possible retaliation.”

13 60. The memorandum noted that if the nature of the internal concerns surrounding
14 Morpheus became public, it could be damaging to Google’s brand. “This puts us in a difficult
15 position. So rather than specifically allege wrongdoing on what has gone before, and ask for an
16 investigation into scientific misconduct (a likely protracted process with increased chances of a
17 leak), we decided to document our findings in a constructive manner that would invite
18 constructive dialog.”

19 61. Dr. Chatterjee noted that the findings of the Takeaways deck were in “direct
20 contradiction with the conclusions put forth by the Morpheus team (and presented by Jeff [Dean]
21 recently which mis-represent our findings[.]”

22 62. The memorandum showed a screenshot from a recent slideshow presentation
23 delivered by Dean. The slide for Dean’s presentation states, “Reinforcement learning approach
24 generates superhuman macro placements in several hours (decreasing)” and “Outperforms
25 academic state-of-the-art and strongest commercial auto macro placers[.]”

26 63. Immediately below the screenshot, the memorandum continues, “To be clear, we
27 do NOT have evidence to believe that RL outperforms academic state-of-art and strongest
28 commercial macro placers. The comparisons for the latter were done so poorly that in many cases

1 the commercial tool failed to run due to installation issues. In other cases, Morpheus only
2 succeeded in after extensive per-benchmark finetuning of cost functions and algorithms by its
3 core development team, i.e., extreme amounts of cherry picking, and even then, it only ‘won’ in
4 half the cases.”

5 64. The memorandum also notes that Google was in discussions with Company S
6 regarding a large cloud deal but the relationship had become “somewhat rocky” due to Company
7 S’s “reasonable questions regarding Morpheus vis-a-vis their own offerings, and our avoidance
8 of clear and direct answers to them. This has been compounded by our public statements and hype
9 on Morpheus (which, as noted above, we do not think are well-substantiated). At the present
10 moment, the relationship is on a much stronger footing as a result of much deeper technical
11 conversations and honesty on both sides, but we want to ensure that this is not jeopardized by ill-
12 conceived attempts to productize Morpheus either directly (through Cloud) or with a competitor
13 to [Company S].”

14 65. In writing the November 2020 memorandum, Dr. Chatterjee disclosed information
15 to superiors which he had reasonable cause to believe disclosed violations of a state or federal
16 statute as described earlier. Moreover, Dr. Chatterjee’s email constituted a refusal to engage in
17 acts that would result in violations of a state or federal statute.

18 66. The memorandum spurred a lengthy email discussion that lasted for much of
19 November 2020. Five months later, Google later unlawfully disciplined Dr. Chatterjee for the
20 legally protected disclosures contained in the memorandum and email thread. The legally
21 protected disclosures of information in the email thread include (with emphasis in the original):

- 22 • “We believe that based on the results Morpheus has generated, the
23 representations that Anna and Azalia are making about Morpheus are
24 untrue. **Since selling those representations to [Company S] would be**
25 **highly misleading, we decided to halt further productization efforts**
26 **with [Company S].”**
27 • Commenting on Dean’s slide that claimed Morpheus outperformed
28 academic state-of-the art and the strongest commercial auto macro placers,

1 Dr. Chatterjee stated, “**The reality: Morpheus is nowhere close to**
2 **outperforming a commercial macro placer.** On each benchmark that
3 Morpheus won, it did so after extensive cherry picking including per-
4 benchmark custom cost functions and algorithms! There are several other
5 problems with the benchmarking process outlined (perhaps too kindly) in
6 the slides above. [¶] **To summarize: Given the evidence we have, for us**
7 **to represent to [Company S] that we have a breakthrough in Morpheus**
8 **would be highly misleading, particularly, in the context of on-going**
9 **negotiations for a 120 MM/5 year Cloud contract that is driven to a**
10 **large extent by their desire to engage in joint research (based on their**
11 **perception and our implied consent that we are leaders in applied**
12 **AI/ML).** [¶] Furthermore, to make things worse, the benchmarking which
13 is used for the false claim above was financed partly by [Company S]
14 through licenses of their tool and associated training sessions as a specific
15 gating step towards productization.”

- 16 • “Since there are many senior people on this thread, let us ask ourselves as
17 to how we got here, i.e., we are discussing the possibility of potential fraud
18 with a 3rd party that very likely would have gone through were Kernel not
19 in the picture to prevent it.”

20 67. In the same email thread, Le, who worked on Morpheus, accused Dr. Chatterjee
21 of undermining, and trying to shut down Morpheus. Bengio accused Dr. Chatterjee of
22 “undermining [colleagues] behind their back[.]”

23 68. However, Babu, Collins, and Kacholia all defended Dr. Chatterjee. Babu
24 encouraged everyone to focus on the issues and commented, “have observed a tendency from
25 Morpheus TLs to avoid engaging dissenting voices/work. I’ve given azalia@ constructive
26 feedback on this in the past, and going forward suggested they shape the research agenda to be
27 less intertwined with commercial flows (enabling more meaningful research community
28 engagement.) Despite this feedback, the TLs are still pushing to productize Morpheus internally

1 and engage partners externally (neither of which in my view serves the research agenda.)”

2 69. Collins stated, “I’d don’t see ‘cheating’, I see some researchers who are excited
3 about their early results, perhaps hype them and are operating in environments we endorse
4 (conferences, Perf) with lots of incentives to do so. I don’t see ‘bullying’, I see a skeptical
5 researcher rationally worried about the negative consequences of overselling a key partner.”

6 70. Plaintiff alleges, based upon information and belief, that Collins intended to refer
7 to Dr. Chatterjee when he wrote, “I don’t see ‘bullying’, I see a skeptical researcher rationally
8 worried about the negative consequences of overselling a key partner.” Plaintiff further alleges,
9 based upon information and belief, that Collins (and, by extension, Google) therefore believed
10 that Dr. Chatterjee had reasonable cause to raise the concerns he raised in the memorandum and
11 email thread. Stated differently, Collins and Google were consciously aware that Dr. Chatterjee
12 was raising his concerns professionally and in good faith – and yet disciplined and later terminated
13 him anyway.

14 71. Kacholia responded to Collins above statement by writing, “+1 to all that Eli called
15 out here[.]”

16 72. Plaintiff alleges, based upon information and belief, that Kacholia believed that
17 Dr. Chatterjee was not bullying anyone and that Dr. Chatterjee was a skeptical researcher
18 rationally worried about the negative consequences of overselling a key partner.

19 73. The email thread with Babu, Sukthankar, Le, Bengio, Collins, and Kacholia
20 concluded with a suggestion that a “reconciliation” study be undertaken to “unify the different
21 perspectives on the technical side” between the Morpheus and the Kernel teams.

22 74. In or about March 2021, the Kernel team internally published the results of the
23 “reconciliation” study. The study observed that:

- 24 • “SA [simulated annealing] and RL [reinforcement learning] reach similar optimal
25 values on most blocks. On remaining ‘crowded’ blocks where macros have high
26 utilization SA is better.”
27 • “SA reached optimal faster than RL and did not use TPUs.”

28 //

1 75. Morpheus team member Joe Jiang independently reviewed and reproduced the
2 experiments in the study. He stated that his “[r]eproduced results are consistent with [the] study’s
3 observation[.]”

4 76. The “reconciliation” study and Joe Jiang’s review further bolstered Dr Chatterjee’s
5 belief that the arXiv paper was fraudulent and in violation of a state or federal statute.

Dr. Chatterjee's Whistleblowing Results in Illegal Written Discipline

77. In or about February 2021, Google's Employee Relations contacted Dr. Chatterjee.

8 78. Plaintiff alleges, based upon information and belief, that Employee Relations
9 became involved due to a complaint by either or both of Goldie and Mirhoseini.

10 79. Plaintiff alleges, based upon information and belief, that Dr. Chatterjee's protected
11 disclosures of information as described herein were a contributing factor in the complaint being
12 made to Employee Relations.

13 80. Plaintiff alleges, based upon information and belief, that Dr. Chatterjee's refusal
14 to engage in acts that would result in a violation of a state or federal statute as described herein
15 was a contributing factor in the complaint being made to Employee Relations.

16 81. Dr. Chatterjee shared the memorandum and email thread with Courtney Laster in
17 Employee Relations, which in itself was a legally protected disclosure of information which Dr.
18 Chatterjee had reasonable cause to believe disclosed a violation of a state or federal statute.
19 Plaintiff alleges, based upon information and belief, that Laster was a superior.

20 82. In the email forwarding the thread to Laster on February 10, 2021, Dr. Chatterjee
21 wrote (with emphasis added):

As I mentioned, I believe this is a bad faith complaint caused by our refusal to suppress negative results and/or by a TpGM on this project who had performance problems (and was closely involved in the data evaluation process that is under suspicion) and was asked to find a new role.

25 Since there have been long running concerns about **potential fraud** in Morpheus,
26 certainly conversations with folks in and around the team have centered around
27 discussions of honesty/fraud/scientific misconduct in an attempt to understand what
28 is going on. Please see this background document (shared with leadership) that
outlined the concerns I have heard from people and what I personally experienced.
I had forgotten but rereading it now, I see that I had captured the concern regarding

1 perceived favoritism in this document (that you brought up).

2 Here is the email chain based on this document. **The discussion also touches on**
3 **potential fraud (at a time we were in delicate negotiations with a 3P)** and our
opinion as to whether further investment in Morpheus is justified or not.

4 Please do keep me updated, and let me know how I can help.

5 83. In writing the above statements, Dr. Chatterjee disclosed information to superiors
6 which he had reasonable cause to believe disclosed violations of a state or federal statute,
7 including the three levels of fraud discussed earlier and whistleblower retaliation.

8 84. On April 15, 2021, Google violated California Labor Code sections 1102.5(b) and
9 (c) by disciplining Dr. Chatterjee for his legally protected activity in a “written warning”.

10 85. The written warning acknowledges that Google was punishing Dr. Chatterjee for
11 his protected activity. The warning was delivered by Eli Collins – the same Collins who defended
12 Dr. Chatterjee in the email thread that Google was now labeling as unprofessional to justify its
13 illegal discipline. The warning stated in pertinent part, “HR received a complaint about your
14 conduct and during the investigation, it was revealed that you verbally raised concerns about
15 another team’s research in an unprofessional tone and manner, which included making incredible
16 claims of **fraud** and academic misconduct . . .” (Emphasis added.)

17 86. The warning also falsely accused Dr. Chatterjee of calling the Morpheus project a
18 “train wreck” and “tire fire.”

19 87. The warning also falsely accused Dr. Chatterjee of “admitting” that he did not
20 have proof that Googlers engaged in fraud or academic misconduct. In reality, Dr. Chatterjee had
21 extensive evidence of such.

22 88. The warning continues, “This behavior was inappropriate and in possible violation
23 of Google’s conduct policies.” It later states, “You have demonstrated poor judgement in this
24 matter, all of which causes me concern with respect to your performance. Thus, your Perf rating
25 will be negatively impacted, your compensation will align with that negatively impacted rating
26 and you will be ineligible for Promo this upcoming 2021 YE cycle.” Thus, by Google’s own
27 admission, the written warning materially and negatively impacted Dr. Chatterjee’s terms,
28 privileges, and conditions of employment, constituting an adverse employment action.

1 89. The written warning also violated California Labor Code section 1102.5(a), which
2 states “An employer [. . .] shall not make, adopt, or enforce any rule, regulation, or policy
3 preventing an employee from disclosing information to [. . .] to a person with authority over the
4 employee, or to another employee who has authority to investigate, discover, or correct the
5 violation or noncompliance, if the employee has reasonable cause to believe that the information
6 discloses a violation of state or federal statute, or a violation of or noncompliance with a local,
7 state, or federal rule or regulation, regardless of whether disclosing the information is part of the
8 employee’s job duties.” The written warning was a rule prohibiting Dr. Chatterjee from engaging
9 in legally protected activity – an unlawful rule that Google would (unlawfully) use to justify
10 terminating Dr. Chatterjee a year later.

11 90. Plaintiff alleges, based upon information and belief, that Google acted with malice,
12 oppression, and fraud and/or ratified and approved the malice, oppression, and fraud of the
13 complainants when it punished a whistleblower in conscious disregard of his rights.

14 91. During the cursory “investigation” of the complaint, Employee Relations never
15 asked Dr. Chatterjee whether he used the terms “tire fire” or “train wreck.” Nor did Google ask
16 Dr. Chatterjee to identify witnesses who could corroborate that he did not use those terms. (Dr.
17 Chatterjee did not use those terms in either the email thread or the memorandum.) In fact,
18 Employee Relations never interviewed the person who allegedly witnessed these comments or do
19 anything to assess this person’s credibility and motives. Employee Relations disciplined Dr.
20 Chatterjee based upon hearsay.

21 92. Moreover, Employee Relations did not ask Dr. Chatterjee about the substance of
22 his fraud concerns.

23 93. Plaintiff alleges, based upon information and belief, that the reason Google
24 conducted a shoddy investigation is because it was not genuinely interested in discovering the
25 truth. Google was not genuinely interested in curing or correcting Google’s violations of law.
26 (Indeed, Employee Relations personnel do not have the training, education, or experience to
27 investigate the scientific merits of the ArXiv paper or the Morpheus team’s research.) Google
28 simply wanted an excuse to punish a whistleblower. Plaintiff further alleges, based upon

1 information and belief, that an employee using the terms “tire fire” and “train wreck” – which, to
2 be clear, Dr. Chatterjee did not use to describe Morpheus or the researchers on that team – would
3 typically result in nothing more than a verbal reprimand, if that. To put it differently, had Dr.
4 Chatterjee not engaged in legally protected activity by disclosing fraud to superiors, he would not
5 have received a written warning.

6 94. Plaintiff alleges, based upon information and belief, that Google did not discipline
7 or reprimand Le and Bengio for their comments in the email thread, which Plaintiff alleges, based
8 upon information and belief, that Google considered significantly more unprofessional than the
9 legally protected disclosures made by Dr. Chatterjee.

10 **Google Doubles Down On Its Fraud With The *Nature* Paper**

11 95. On June 9, 2021, Google’s *Nature* paper was published. This paper not only
12 suppressed the data generated by the Kernel team, *but it also omitted data generated by the*
13 *Morpheus team* that were contrary to the bold claims in the *Nature* paper.

14 96. These omissions are analogous to a pharmaceutical trial where 11 participants take
15 an experimental drug and 5 of them suffer adverse reactions. It would be disingenuous for
16 researchers to ignore the 5 participants who suffered adverse reactions and proclaim that 6 out of
17 6 participants suffered no adverse reaction. But that is the equivalent of what Google did in the
18 *Nature* paper.

19 97. The omissions in the *Nature* paper were not only unethical and violated Google’s
20 AI Principles and Code of Conduct, but Dr. Chatterjee believed, reasonably and in good faith,
21 they were fraudulent to shareholders and Company S in violation of a state or federal statute. The
22 fraud in the *Nature* paper was considerably worse due to the prestige of the journal.

23 98. The *Nature* paper captured considerable attention in the industry.

24 99. Plaintiff alleges, based upon information and belief, that the arXiv paper, the
25 public presentations on Morpheus by Dean and others, and the *Nature* paper resulted in extensive
26 inbound commercial interest for AI and Cloud partnerships from multiple large semiconductor
27 and electronic design automation companies.

28 //

1 100. While the *Nature* paper attracted praise, it also triggered skepticism. One of the
2 reviewers of the *Nature* paper noted in an accompanying commentary that the results “seem
3 magical” but that “[t]he authors’ intention to make their code available is invaluable in this light.”
4 Although at the time Google promised to make the code and data fully available, it never did. As
5 the same reviewer noted in a recent article titled “Assessment of Reinforcement Learning for
6 Macro Placement” that was invited to the 2023 International Symposium on Physical Design,
7 “[e]valuation of Nature and CT has been hampered because neither data nor code in these works
8 is, to date, fully available.” “To date, the bulk of data used by Nature authors has not been
9 released, and key portions of source code remain hidden behind APIs.” Plaintiff alleges, based
10 upon information and belief, that Google has not made the full code and data fully available
11 because doing so would reveal Google’s fraud.

12 101. Zoubin Ghahramani, VP of Google Brain, and direct report of Dean, tweeted on
13 April 7, 2022, that the work in the *Nature* paper had been “independently replicated” and “open-
14 sourced.”¹¹ This statement was brazenly false, not just because key components of the code were
15 not open-sourced then (or now) but also because the main results of the *Nature* paper (as described
16 in its Table 1) were based on proprietary designs from Google’s TPU chips, designs that have not
17 been released publicly. Plaintiff alleges, based upon information and belief, that Ghahramani
18 made this false statement to reassure Google’s current and prospective shareholders and partners
19 and customers in the semiconductor and electronic design industries in response to the leak of the
20 Stronger Baselines paper (which will be discussed in more detail later).

21 102. On June 12, 2021, Yann LeCun, a respected computer scientist who works at Meta,
22 Inc., tweeted, “UPDATE: the rumor on the street is that the comparison with existing tools from
23 commercial EDA houses is not as favorable as the paper claims. [¶] A story to follow.....” (Dr.
24 Chatterjee was not the source of the leak to LeCun.)

25 103. That same day, June 12, 2021, Research Scientist Amir Yazdanbakhsh emailed
26 Dr. Chatterjee asking to be added back as an author on the report comparing reinforcement
27 learning to simulated annealing so that his contributions would be recognized. Dr. Yazdanbakhsh,
28

¹¹ Plaintiff does not allege that Ghahramani’s tweet was an adverse employment action.

1 who had worked on the study, had previously asked for his name to be removed at the request of
2 his manager, James Laudon, a director in Google Brain. “I am afraid of retaliation from my
3 managerial chain because the results in this study have potential implications on the claims made
4 in the recently published nature paper and my manager is an author on the paper (I have separately
5 filed a complaint about previous retaliation).” Noting that Dr. Chatterjee’s manager at that time
6 (Senior Director Sukthankar) was supportive at the time, Dr. Yazdanbakhsh asked for protection
7 from further retaliation. Dr. Yazdanbakhsh wrote, “Please note that since Jeff [Dean] is an author
8 on this paper, this is a matter of some sensitivity.”

9 104. Per Dr. Yazdanbakhsh's request, Dr. Chatterjee shared the email with Sukthankar.
10 Plaintiff alleges based upon information and belief that shortly thereafter Dean was made aware
11 of Dr. Yazdanbakhsh's (legally protected) email and that Google never investigated Dr.
12 Yazdanbakhsh's complaint. In fact (as will be seen), Laudon and Google continued to retaliate
13 against Dr. Yazdanbakhsh, Plaintiff alleges, based upon information and belief.

14 105. Worried that Dean's actions were further exposing Google to legal and
15 reputational harm by virtue of the *Nature* paper, Dr. Chatterjee emailed Google CEO (and Dean's
16 manager) Sundar Pichai, Sukthankar, and Yagnik on June 13, 2021. By writing this email, Dr.
17 Chatterjee disclosed information which he had reasonable cause to believe disclosed a violation
18 of a state or federal statute, the attempt to defraud shareholders and Company S. The email states
19 (with emphasis in the original):

20 || Sundar, Jay, Rahul:

(Sundar, I am escalating this to you in order to create a safe space for Jay and Rahul to operate. Happy to work directly with Jay and Rahul on this.)

The situation with the recent Nature paper from Jeff and team is fraught. I believe Jeffs sudden post (see below) on this 3 week old thread is in response to <https://twitter.com/ylecun/status/1403731000392306690> in an attempt to do some damage control, but I worry that it may cause more damage if not thought through carefully. Yann is not alone - there is significant concern in the academic and industrial community about the paper.

28 The situation is delicate and may devolve rapidly (like in the situation with [Name Omitted]). I believe now would be a good time to ask Jeff to

1 **recuse himself from this affair, before he says or does something that**
2 **causes us to double down on a bad hand.** I believe Jeff has a significant
3 conflict of interest here, and he has shown poor judgement in this matter in
4 the past 18 months. (For example, in January 2020, he shut me down through
my manager at the time Anand Babu when I asked for baselines. He has
repeatedly turned a blind eye to our findings and/or concerns from external
experts that we surfaced to him.)

5
6 **Note that the comparison study with commercial alternatives that Jeff**
7 **refers to below has some significant – one may argue, deliberate –**
8 **limitations that we surfaced to the rest of the team, but we were ignored.**
9 **It is important to share those caveats along with the study, otherwise**
incorrect conclusions could be drawn. I hope he does the right thing by
sharing it himself, but if not, I would like to ask for safe harbor to post
the link myself on that mailing list.

10
11 Furthermore, Anand and I had already shared the gist of our findings
12 with [Company S] (with agreement from the team) at the time this study
13 was done. The study was done in part as a first step toward potential
14 commercialization with [Company S] (and conducted with resources
from [Company S]). Since it was done in the context of a large potential
Cloud deal, it would have been unethical to imply that we had
revolutionary technology when our tests showed otherwise. (Anand is not
on this thread since he left Google in part due to his dissatisfaction of how
Jeff has handled this.)

16
17 I was, of course, unaware of the existence of the Nature submission itself
until the publication this week, since they dropped our team members
(Anand and Sungmin) from the list of authors relative to the earlier arXiv
preprint (presumably since our findings were not positive). There is also
reason to believe that the Nature submission did not go through the normal
pub-approve process.

21
22 Last but not least, we have also been prevented from publishing an important
related result on the matter. I believe both for scientific integrity, and for our
reputation, we need to respond carefully with all the known facts here instead
of doubling down on a difficult-to-defend position in a knee-jerk fashion.

24
25 Please let me know if you have any questions or suggestions. My cell phone
is [Omitted] and I am happy to speak at any time.

26 Thanks
27 Sat

28 //
28 //

1 106. Dr. Chatterjee never received the safe harbor to post the caveats on the internal
2 mailing list. Yagnik expressly asked him to refrain from posting the caveats.

3 107. Plaintiff alleges, based upon information and belief, that Dean learned about Dr.
4 Chatterjee's (legally protected) email shortly after it was sent.

5 108. On June 14, 2021, Dr. Chatterjee emailed Dean based upon a message he sent in
6 an internal Google mailing list.¹². The email stated in relevant parts with emphasis in the original:

7
8 **The study you referenced CANNOT be used to back up the Nature paper
9 (vis-a-vis your statement in the mailing list "comparing the RL algorithm
10 described in our recent Nature paper vs. Google's physical design engineer
11 human experts vs. two commercial tools") for several reasons:**

12 1. The Nature paper presents only the GRL algorithm. In the study many, many
13 different algorithms were tried to see what gives best results including GRL, RL,
14 with various cost functions and with SA turned on or off. In fact, in the 13 first
place victories for Morpheus, there were 8 different variants. Many more may
have been tried behind the scenes. This is reflected in the results table itself from
the deck that you link to in your post (slide 25):

15 To put it in compiler terms, the difficulty in building a good optimization pass is
16 to build a pass that works generally on most programs. If you let a large team
17 build different variants of a pass customized to each benchmark program (since
18 there are only 20 programs, even for a team of 5, it is not too difficult), it is unfair
to compare with a pass which you run with a couple of default settings that built
without looking at any of these benchmarks.

19 Furthermore, for the GRL results, we do not know what the test/train separation
20 was. The GRL model may have been trained on the block or on near-dups, so I
21 feel uncomfortable signing off on that without knowing more details.

22 2. The industrial tools were not set up competitively, or even properly. 1/3 of the
23 [redacted] runs failed and the failures were not diagnosed, but [redacted] was
24 marked as having lost those runs. Sungmin being the diligent person he is, noticed
25 this only days before the presentation to you since someone else was in charge of
running the [redacted] tool (and had simply written off [redacted] instead of
investigating the failures).

26 [. . .]

27
28 ¹² Plaintiff does **not** allege that Dean's message or failure to retract the message constituted an adverse
employment action.

1 4. In spite of the loaded deck, Morpheus variants as a group only won 13/20. I
2 think if we had even one [redacted] or [redacted] support engineer just tweaking
3 the knobs (which we were not allowed to do), let alone their development team
4 scrutinizing the benchmarks, and changing cost functions and algorithms
accordingly, I think they would have probably have won all the benchmarks. This
is even ignoring their commercial vizier-type AI solutions like [redacted] to tweak
the knobs automatically.

5 It would also be unfair to pick the few benchmarks post facto on which GRL did
6 well and imply that that was the entire benchmark set. To avoid any
7 miscommunication, one then has to say that GRL did not do so well on the rest
and share that data as well.

8 109. Dr. Chatterjee's above email described, in unmistakable terms, how the *Nature*
9 paper had cherry-picked data and fraudulently omitted material data – from the Morpheus team's
10 *own studies* – to create the misleading, false impression that Morpheus had dramatically
11 outperformed other tools in experiments. It described how the Morpheus team had extensively
12 customized DRL-CT and variants while failing to properly install comparator tools, effectively –
13 possibly intentionally – rigging the experiments in Google's favor. Viewed in the worst light, the
14 email disclosed blatant attempted fraud on the market and attempted fraud of Company S. Viewed
15 in the best light, the information disclosed a willful and deliberate failure to comply with Google's
16 public promises to shareholders and business partners to conduct research with integrity, which
17 Dr. Chatterjee also reasonably believed constituted fraud. On July 1, 2021, Dr. Chatterjee
18 forwarded his email thread to CEO Pichai.

19 110. In or about June 2021, Dr. Chatterjee spoke with Yagnik and asked for guidance.
20 Yagnik said he would not get involved and would not be looking into whether the Morpheus team
21 had engaged in misconduct.

22 111. That same month, in June 2021, Plaintiff, one of his direct reports Dr. Sungmin
23 Bae, Dr. Yazdanbakhsh, and one other Google employee ("Stronger Baselines Team" or the "SB
24 Team") started work on a paper to report the results of their experiments comparing DRL-CT to
25 competing methods for chip placement. For Dr. Chatterjee, one of the purposes of the paper was
26 to cure Google's fraud by publishing more complete data, thereby allowing readers (including
27 Company S, other current and prospective partners and customers in the semiconductor and
28 electronic design industries, shareholders, and potential shareholders) to draw their own

1 conclusions. Dr. Chatterjee was trying to protect Google from both legal and reputational harm
2 without triggering further retaliation by Google.

3 112. In or around June 2021, external scientists (non-Google employees) became
4 involved with the SB Team in comparing DRL-CT methods to an academic method (“RePlAce”)
5 using publicly available benchmarks that have been used to evaluate progress in the academic
6 literature for nearly two decades.

7 113. The SB Team’s experiments revealed that RePlAce outperformed DRL-CT and
8 did so using less computer time.

9 114. The SB Team along with the external scientists prepared a paper for external
10 publication titled “Stronger Baselines for Evaluating Deep Reinforcement Learning in Chip
11 Design” (hereinafter, “Stronger Baselines” paper).

12 115. The Stronger Baselines paper included the experimental data of comparisons of
13 DRL-CT with RePlAce and with simulated annealing.

14 116. An older draft of the Stronger Baselines paper was subsequently leaked after Dr.
15 Chatterjee’s employment ended. Dr. Chatterjee did not leak the paper. He does not know who
16 did. The draft that leaked, however, is authentic. The data in the Stronger Baselines paper
17 contributed to Dr. Chatterjee’s belief that the *Nature* paper was fraudulent and in violation of state
18 and federal law. Pertinent data that contributed to Dr. Chatterjee’s belief include:¹³

- 19 • “We find that RePlAce produces 26% better wirelength [a common
20 early-stage design metric targeted by placement tools] than RL while
21 using 5 orders of magnitude [that is, 100,000 times] less computation”
- 22 • “Our main result is that even if RL is pre-trained for 48 hours on the *same*
23 set of blocks on which it is fine-tuned for a further 6 hours, it is not
24 enough to beat SA [simulated annealing] running for only 6 hours.”

25 //

26 //

27 //

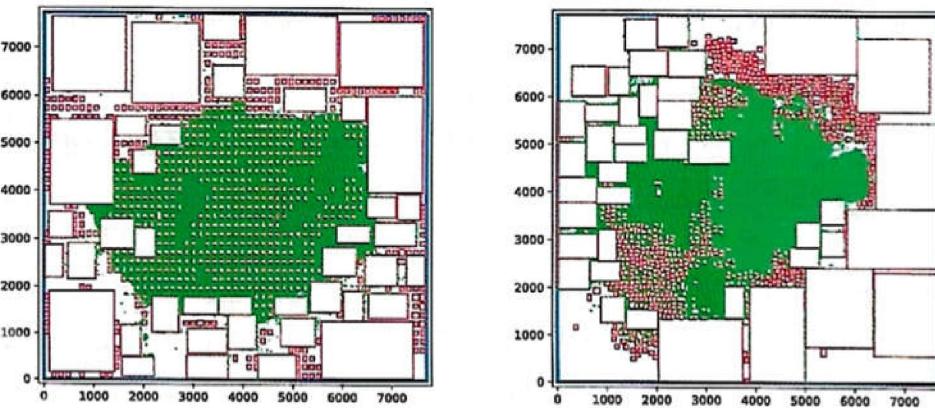
28

¹³ These excerpts are now in the public domain due to the leak.

1 117. The Stronger Baselines paper provided a scientific explanation for the poor
2 performance of DRL-CT in comparison to RePlAce,” as explained (for example) in Figure 2 of
3 the leaked paper and its caption:

4

5



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Figure 2: The final placement from **RL** (left) and **RePlAce** (right) for the **ibm10** benchmark. The coarse grid constraint imposed in the **RL** formulation (in order to have a manageable action space) can lead to unnecessary spreading of small macros which can increase wirelength (and congestion).

13

14

15 118. On October 12, 2021, Employee Relations contacted Dr. Chatterjee regarding
16 alleged concerns about the experiments being run by Kernel team. Plaintiff alleges, based upon
17 information and belief, that either or both of Goldie or Mirhoseini instigated the investigation.

18

19

20

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119. Based upon how Google had twisted his words in its last investigation, Dr. Chatterjee asked to respond in writing. He also noted, “[T]his is a delicate and potentially legally sensitive matter[.]”

120. Dr. Chatterjee subsequently submitted a lengthy written statement to Employee Relations. After answering the questions posed by Employee Relations, Dr. Chatterjee explained the broader context. He expressed his fear that the inquiry was retaliation for his work on Morpheus, including for expressing that the core claims being made about Morpheus were not true. He explained how the *Nature* paper “lacked data from our comparisons and made claims that I was concerned were misleading or incorrect.” Dr. Chatterjee also disclosed the unlawful retaliation that he had suffered and reiterated his concerns about shareholder fraud:

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I am also concerned that I am being retaliated against for reporting information that might conflict with public statements by Google, available to its shareholders, including in Alphabet’s 2020 Proxy Statement about Google’s AI principles, including upholding high standards of scientific excellence, open inquiry, intellectual rigor, integrity and collaboration, in addition to publishing educational materials, best practices and research that enable more people to develop useful AI applications— something that would be impeded by any inaccurate or misleading publications.

121. The written statement reiterated that Dr. Chatterjee had been misquoted in the (illegal) written warning and had never stated that he lacked evidence of fraud.

122. In submitting the written statement, Dr. Chatterjee disclosed information to superiors which he had reasonable cause to believe disclosed violations of a state or federal statute.

123. On or about November 1, 2021, the SB Team requested permission from Google to publish the “Stronger Baselines” paper, a request that was eventually denied.¹⁴

124. The Employee Relations investigation ended on November 11, 2021, with a finding that Dr. Chatterjee had not violated company policy. However, Google reiterated its earlier (illegal) written warning.

125. Yagnik established an *ad hoc* “resolution committee” regarding the Stronger Baselines paper. The committee, however, was chaired by Jon Orwant, who reported up to Dean. Moreover, Yagnik himself reported directly to Dean. In or about November 2021, Dr. Chatterjee spoke with Yagnik and expressed his concern that the committee was not truly independent. Yagnik refused to establish a truly independent committee.

126. In January 2022, Dr. Chatterjee asked Employee Relations to permit him to submit a written response to the written warning to be maintained in his employment file. Google granted the request to put his response in the personnel file, but refused to correct the written warning.

127. In an email on February 10, 2022, Bernita Jameson, Senior Director in Employee Relations, reiterated that the written warning was due to Dr. Chatterjee’s legally protected activity. Specifically, Jameson wrote, “The investigation found that you made inappropriate and

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¹⁴ Plaintiff does not allege that Google’s refusal to publish the Stronger Baselines paper somehow constituted an adverse employment action.

1 unprofessional comments about other Googlers - specifically, that you made baseless claims of
2 **fraud** and academic misconduct against other Googlers and shared unprofessional criticism about
3 their work during several verbal conversations.” (Emphasis added.)

4 128. In February 2022, Dr. Chatterjee had ongoing discussions with the resolution
5 committee regarding the Stronger Baselines paper, which included a meeting on February 17,
6 2022, and a lengthy email thread in which Dr. Chatterjee continued engaging in legally protected
7 activity.

8 129. In an email on February 18, 2022, Dr. Chatterjee wrote (with emphasis added),
9 “Not publishing our paper before further experiments are conducted while letting the *Nature* paper
10 stand without an on-going dialogue could undermine Google’s credibility and reflect a failure of
11 Google to adhere to its own AI principles (including accountability and high standards of
12 scientific excellence across the board). Worse yet, we risk distorting the scientific record and
13 misleading the scientific community about what has been achieved. [. . .] **Needless to say, this is**
14 **not only the ethical thing to do, but also the legal thing to do:** It would allow us as a company
15 to stay true to the representations we have been making to our shareholders and general public
16 about our AI research.”

17 130. In or about either late February 2022 or March 2022, Dr. Chatterjee spoke with
18 Yagnik. Dr. Chatterjee reiterated that the committee was not independent. Dr. Chatterjee stated
19 that if the committee did not permit publication of the paper (and thus cure Google’s fraud), that
20 he was going to have to raise the issue with CEO Pichai and the Alphabet Board. Dr. Chatterjee
21 stated that he believed company policy required him to escalate the issue since it involved Dean,
22 a direct report of the CEO.

23 131. On March 3, 2022, Orwant expressly informed Dr. Chatterjee that the committee
24 would not be investigating whether the *Nature* authors behaved inappropriately. Orwant said such
25 concerns should be raised with Employee Relations. Dr. Chatterjee subsequently raised the
26 concerns with Employee Relations. Plaintiff alleges, based upon information and belief, that
27 Google never investigated whether the *Nature* paper was fraudulent or whether its authors had
28 engaged in academic misconduct.

1 132. On March 14, 2022, Dr. Chatterjee was yet again contacted by Employee
2 Relations. Plaintiff alleges, based upon information and belief, that this third investigation was
3 instigated by Goldie and Mirhoseini. Plaintiff alleges, based upon information and belief, that Dr.
4 Chatterjee was accused of using the word “fraud” during the February 17, 2022 meeting. While
5 Dr. Chatterjee concedes that his statements implied fraud (and were legal protected just the same),
6 he avoided using that term explicitly at the meeting due to Google’s illegal written warning a year
7 earlier.

8 133. Numerous witnesses attended the February 17, 2022 resolution committee
9 meeting. Dr. Chatterjee identified witnesses who could corroborate what was (and was not) said
10 at that meeting. Plaintiff alleges, based upon information and belief, that Google did not interview
11 these witnesses because Google did not care about discovering the truth. Google was simply
12 looking for an excuse to fire a whistleblower.

13 134. On March 23, 2022, the resolution committee informed Dr. Chatterjee that it was
14 denying publication of the Stronger Baselines paper. Concerned that Google was refusing to cure
15 its fraud, Dr. Chatterjee stated his intent to raise the issue with CEO Pichai and the Alphabet
16 Board of Directors. Dr. Chatterjee reiterated, “It is in the best interests of Google to have this
17 paper out to the scientific community both to provide an opportunity to ensure completeness and
18 accuracy of the scientific record (given the issues we have raised with the Nature paper) and to
19 avoid misleading the scientific community by withholding material negative results. Doing so
20 would also ensure that we are not violating the principles of scientific excellence and transparency
21 that we have promised to our shareholders and the public as part of our AI Principles.”

22 135. Plaintiff alleges, based upon information and belief, that Yagnik requested
23 permission to terminate Dr. Chatterjee on May 23, 2022, after Dr. Chatterjee threatened to
24 disclose information to CEO Pichai and the Board that divulged Google’s fraud. Plaintiff alleges,
25 based upon information and belief, that Yagnik’s request to terminate Dr. Chatterjee specifically
26 mentioned Dr. Chatterjee’s protected activity (specifically that Dr. Chatterjee had alleged
27 “fraud”) and for violating the (illegal) written order of April 15, 2021.

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1 136. Plaintiff was fired on May 23, 2022. Plaintiff alleges based upon information and
2 belief that his extensive protected activity as described in detail in this First Amended Complaint
3 were, either individually or as a whole, a contributing factor in the decision to terminate him.

4 137. Google’s reasons for terminating Dr. Chatterjee were not legitimate. Nor were
5 Google’s reasons for terminating Dr. Chatterjee independent of his protected activity. Just the
6 opposite: Google’s reasons for terminating Dr. Chatterjee are *dependent* on his protected activity
7 because Google has already admitted that it fired Dr. Chatterjee for “baselessly” alleging fraud to
8 managers.

9 138. Plaintiff alleges, based upon information and belief, that Google and/or its
10 managing agents acted with malice, oppression, and fraud in terminating him.

11 139. Plaintiff alleges, based upon information and belief, that after his unlawful
12 termination, Google retaliated against at least one other whistleblower who worked on the
13 Stronger Baselines paper, Dr. Yazdanbakhsh. Plaintiff alleges, based upon information and belief,
14 that Dr. Yazdanbakhsh's manager (and author of the *Nature* paper) James Laudon told
15 Dr. Yazdanbakhsh in about April 2022 that he was being denied promotion because he "spent
16 considerable time on SB paper despite guidance to focus his efforts elsewhere[.]". Plaintiff alleges,
17 based upon information and belief, that Google was referring to the Stronger Baselines paper.
18 Plaintiff alleges, based upon information and belief, that Google denied promotion to
19 Yazdanbakhsh in or about April 2022 because it perceived him as having disclosed information
20 which disclosed violations of state and federal law and for his refusal to participate in acts that
21 would have resulted in a violation of state and federal law.

SIXTH CAUSE OF ACTION

Violation of Labor Code section 1102.5

24 140. The allegations set forth in this complaint are hereby re-alleged and incorporated
25 by reference.

141. This cause of action is asserted against Google LLC.

27 142. At all relevant times, Plaintiff was an employee of Defendant.

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1 143. Labor Code section 1102.5, subdivision (a), states that “an employer, or any
2 person acting on behalf of the employer, shall not make, adopt, or enforce any rule, regulation, or
3 policy preventing an employee from disclosing information to a government or law enforcement
4 agency, to a person with authority over the employee, or to another employee who has authority
5 to investigate, discover, or correct the violation or noncompliance, or from providing information
6 to, or testifying before, any public body conducting an investigation, hearing, or inquiry, if the
7 employee has reasonable cause to believe that the information discloses a violation of state or
8 federal statute, or a violation of or noncompliance with a local, state, or federal rule or regulation,
9 regardless of whether disclosing the information is part of the employee’s job duties.

10 144. Labor Code section 1102.5, subdivision (b), states that “[a]n employer, or any
11 person acting on behalf of the employer, shall not retaliate against an employee for disclosing
12 information, or because the employer believes that the employee disclosed or may disclose
13 information, to a government or law enforcement agency, to a person with authority over the
14 employee or another employee who has the authority to investigate, discover, or correct the
15 violation or noncompliance, or for providing information to, or testifying before, any public body
16 conducting an investigation, hearing, or inquiry, if the employee has reasonable cause to believe
17 that the information discloses a violation of state or federal statute, or a violation of or
18 noncompliance with a local, state, or federal rule or regulation, regardless of whether disclosing
19 the information is part of the employee's job duties.”

20 145. Labor Code section 1102.5, subdivision (c), states that an “employer may not
21 retaliate against an employee for refusing to participate in an activity that would result in a
22 violation of state or federal statute, or a violation or noncompliance with a state or federal rule or
23 regulation.”

24 146. As described in this First Amended Complaint, Plaintiff repeatedly disclosed
25 information to persons with authority over him and persons with authority to investigate, discover,
26 or correct violations of state and federal statutes, rules, or regulations. Dr. Chatterjee had
27 reasonable cause to believe that this information disclosed violations of numerous state and
28 federal statutes, which include but are not limited to Cal. Corp. Code § 25401 (securities fraud);

1 Cal. Penal Code § 484 (deceit or fraud); Cal. Penal Code § 532 (theft by false pretenses); Cal.
2 Penal Code §§ 182-185 (conspiracy); Cal. Labor Code §1102.5 (whistleblower retaliation); 8
3 U.S.C. § 1341 (mail fraud); 18 U.S.C. § 1343 (wire fraud); 8 U.S.C. § 1348 (securities fraud); 18
4 U.S. Code § 1349 (attempt or conspiracy).

5 147. As described in this First Amended Complaint, Plaintiff repeatedly refused to
6 engage in acts that would have resulted in a violation of state or federal law, including California
7 Labor Code § 1102.5(a); Cal. Corp. Code § 25401 (securities fraud); Cal. Penal Code § 484
8 (deceit or fraud); Cal. Penal Code § 532 (theft by false pretenses); Cal. Penal Code §§ 182-185
9 (conspiracy); Cal. Labor Code §1102.5 (whistleblower retaliation); 8 U.S.C. § 1341 (mail fraud);
10 18 U.S.C. § 1343 (wire fraud); 8 U.S.C. § 1348 (securities fraud); 18 U.S. Code § 1349 (attempt
11 or conspiracy).

12 148. Dr. Chatterjee's protected activity as described herein was a contributing factor in
13 Google's decision to issue a written warning, terminate him, and create the overall hostile terms
14 and conditions of employment, which each constituted an adverse employment action in violation
15 of California Labor Code section 1102.5, subparts a, b, and c.

16 149. The conduct of Defendant and its managing agents and employees were a
17 substantial factor in causing Plaintiff's harm.

18 150. As an actual and proximate result of the aforementioned violations, Plaintiff has
19 been harmed in an amount according to proof, but in an amount in excess of the jurisdiction of
20 this Court.

21 151. As an actual and proximate result of Defendant's retaliation, Plaintiff has lost
22 wages, benefits, and other out-of-pocket expenses.

23 152. As an actual and proximate result of Defendants' aforementioned acts, Plaintiff
24 suffered emotional distress and physical sickness in an amount according to proof at time of trial.

25 153. The above-described actions were perpetrated and/or ratified by a managing agent
26 or officer of Defendant. These acts were done with malice, fraud, oppression, and in reckless
27 disregard of Plaintiff's rights. Further, said actions were despicable in character and warrant the
28 imposition of punitive damages in a sum sufficient to punish and deter Defendant's future

1 conduct.

2 **SEVENTH CAUSE OF ACTION**

3 **Wrongful Termination in Violation of Public Policy**

4 154. The allegations set forth in this complaint are hereby re-alleged and incorporated
5 by reference.

6 155. This cause of action is asserted against Google LLC.

7 156. At all relevant times, Plaintiff was an employee of Defendant.

8 157. Each of the following statutes codify fundamental public policies: Cal. Corp. Code
9 § 25401 (securities fraud); Cal. Penal Code § 484 (deceit or fraud); Cal. Penal Code § 532 (theft
10 by false pretenses); Cal. Penal Code §§ 182-185 (conspiracy); Cal. Labor Code § 1102.5
11 (whistleblower retaliation); 8 U.S.C. § 1341 (mail fraud); 18 U.S.C. § 1343 (wire fraud); 8 U.S.C.
12 § 1348 (securities fraud); 18 U.S. Code § 1349 (attempt or conspiracy).

13 158. As alleged herein, Dr. Chatterjee engaged in protected activity by (1) refusing to
14 violate the above statutes; (2) exercising his statutory rights under California Labor Code section
15 1102.5; and (3) reporting alleged violations of the aforementioned public policies.

16 159. Dr. Chatterjee's protected activity was a substantial motivating reason for his
17 written warning, termination, and the creation of the overall hostile terms and conditions of
18 employment.

19 160. The conduct of Defendant and its managing agents and employees were a
20 substantial factor in causing Plaintiff's harm.

21 161. As an actual and proximate result of the aforementioned violations, Plaintiff has
22 been harmed in an amount according to proof, but in an amount in excess of the jurisdiction of
23 this Court.

24 162. As an actual and proximate result of Defendant's retaliation, Plaintiff has lost
25 wages, benefits, and other out-of-pocket expenses.

26 163. As an actual and proximate result of Defendants' aforementioned acts, Plaintiff
27 suffered emotional distress and physical sickness in an amount according to proof at time of trial.

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164. The above-described actions were perpetrated and/or ratified by a managing agent
or officer of Defendant. These acts were done with malice, fraud, oppression, and in reckless
disregard of Plaintiff's rights. Further, said actions were despicable in character and warrant the
imposition of punitive damages in a sum sufficient to punish and deter Defendant's future
conduct.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff prays for relief as follows:

- 8 1. For general damages according to proof on each cause of action for which such
9 damages are available;

10 2. For special damages, according to proof on each cause of action for which such
11 damages are available;

12 3. For compensatory damages, according to proof on each cause of action for which
13 such damages are available;

14 4. For punitive damages, according to proof on each cause of action for which such
15 damages are available;

16 5. For prejudgment and post-judgment interest according to law;

17 6. For reasonable attorneys' fees incurred in this action on those causes of action for
18 which such fees are recoverable under the law;

19 7. For costs of suit incurred in this action; and

20 8. For other relief as this Court deems just and equitable.

Dated: February 21, 2023

By:

Lawrence A. Bohm, Esq.
Kelsey K. Ciarimboli, Esq.
Brandon P. Ortiz, Esq.

Attorneys for Plaintiff
SATRAJIT CHATTERJEE

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2 **DEMAND FOR JURY TRIAL**
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Plaintiff hereby demands trial by jury for this matter.

Dated: February 21, 2023

By:

Lawrance A. Bohm, Esq.
Kelsey K. Ciarimboli, Esq.
Brandon P. Ortiz, Esq.

Attorney for Plaintiff
SATRAJIT CHATTERJEE

1 **VERIFICATION OF FIRST AMENDED COMPLAINT FOR DAMAGES**

2

3 I, SATRAJIT CHATTERJEE, have read the attached First Amended Complaint for
4 Damages and hereby attest that the same is true of my own knowledge, except as to those matters,
5 which are therein stated on my information or belief, and as to those matter that I believe it to be
6 true.

7 I declare under penalty of perjury under to the laws of the State of California that the
8 foregoing is true and correct.

9 This Verification was executed on February 21, 2023, in Palo Alto, CA.

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12 SATRAJIT CHATTERJEE

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BOHM LAW GROUP, INC.
4600 NORTHGATE BOULEVARD, SUITE 210,
SACRAMENTO, CALIFORNIA 95834

1 *Chatterjee v. Google, Inc.*
2 Superior Court of California, County of Santa Clara
Case No.: 22CV398683

PROOF OF SERVICE BY ELECTRONIC SERVICE

I, the undersigned declare that I am employed in the County of Sacramento, State of California. I am over the age of eighteen (18) years and not a party to the within action; my business address is: 4600 Northgate Boulevard, Suite 210, Sacramento, California 95834.

On February 21, 2023, I served the within:

**VERIFIED FIRST AMENDED COMPLAINT FOR DAMAGES AND DEMAND FOR
JURY TRIAL**

XX By sending a true copy thereof electronically to the individual(s) and electronic service address(s) as set forth below from the electronic service address:
jburton2@bohmlaw.com.

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**Attorney for Plaintiff (Co-Counsel)
SATRAJIT CHATTERJEE**

I declare under the penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed on February 21, 2023 in Sacramento, California.


Jenni Burton
Paralegal Manager