

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

CHRISTIAN W. SANDVIG *et al.*,

Plaintiffs,

v.

WILLIAM P. BARR, in his official capacity as
Attorney General of the United States,

Defendant.

Case No. 1:16-cv-1368 (JDB)

PLAINTIFFS' STATEMENT OF UNDISPUTED MATERIAL FACTS

Plaintiffs file this Statement of Undisputed Material Facts pursuant to Fed. R. Civ. P. 56(c) and Local Rule 7(h).

Prosecutions Under the Computer Fraud and Abuse Act's Access Provision

1. Courts and federal prosecutors have interpreted the Computer Fraud and Abuse Act's ("CFAA") prohibition on "exceed[ing] authorized access," 18 U.S.C. § 1030(a)(2)(C) (the "Access Provision"), to make it a crime to visit a website in a manner that violates the terms of service or terms of use (hereinafter "terms of service" or "ToS") established by that website. Deposition Transcript of John T. Lynch, Jr. ("Lynch Depo.") at 109-13 (Pl. Ex. 4); Off. of Legal Educ., Exec. Off. for United States Att'ys, Dep't of Justice, *Prosecuting Computer Crimes*, <http://www.justice.gov/criminal/cybercrime/docs/ccmanual.pdf> at 8-9 (Pl. Ex. 5).

2. Many website or platform terms of service prohibit providing false or misleading information and/or creating tester accounts using false information. Declaration of Plaintiff Christopher "Christo" Wilson ("Wilson Dec.") at ¶ 53 (Pl. Ex. 1); Declaration of Plaintiff Alan

Mislove (“Mislove Dec.”) at ¶ 50 (Pl. Ex. 2); Answer, ECF No. 26, at ¶ 124 (Pl. Ex. 6) (referring to Complaint, ECF No. 1, at ¶ 124).

3. The following employment websites had terms of service prohibiting creating accounts using false information and/or providing false or misleading information as of February 14, 2019: LinkedIn, Monster, and CareerBuilder. Wilson Dec. at ¶ 54; *User Agreement*, LinkedIn, at ¶ 2.1, <https://www.linkedin.com/legal/user-agreement> (Pl. Ex. 7); *Terms of Use*, Monster, at ¶¶ 2, 4, <https://www.monster.com/inside/terms-of-use> (Pl. Ex. 8); *Terms and Conditions*, CareerBuilder, at ¶¶ 4.3, 4.4, 14.1, <https://www.careerbuilder.com/terms> (Pl. Ex.9).

4. Many websites’ terms of service prohibit scraping. Answer, ECF No. 26, at ¶ 158 (referring to Complaint, ECF No. 1, at ¶ 158).

5. Some websites’ terms of service prohibit or restrict users from sharing passwords. Answer, ECF No. 26, at ¶ 158.

6. Prosecution under the Access Provision for a website term of service violation may consist of charges in a complaint, information, or indictment. Lynch Depo. at 93-94.

7. The Computer Crime and Intellectual Property Section (“CCIPS”) of the Criminal Division of the U.S. Department of Justice (“Main Justice”) is the most likely entity within Main Justice to seek charges under the Access Provision via complaint, information, or indictment, Lynch Depo. at 98-99, but the National Security Division and other component parts within the Criminal Division also have the authority to seek charges under the Access Provision via complaint, information, or indictment, *id.* at 96.

8. Federal prosecutors in United States Attorneys’ Offices throughout the country have the authority to seek charges under the Access Provision via complaint, information, or indictment. Lynch Depo. at 95-96.

9. Federal prosecutors, whether in the United States' Attorneys' Offices throughout the country or in Main Justice, are not required to consult with CCIPS about investigations into possible violations of the Access Provision until the point at which prosecutors seek charges via complaint, information, or indictment under the Access Provision. Lynch Depo. at 100, 120-23.

10. Charges under the Access Provision for a website term of service violation may result in a plea agreement where a defendant admits to such a violation. Lynch Depo. at 93-94.

11. Main Justice does not have a record of each and every instance where prosecution under the Access Provision for a website term of service violation has been investigated, even since the adoption of recordkeeping requirements in 2014. Lynch Depo. at 122-23, 132-34.

12. Main Justice does not have a record of each and every instance where prosecution under the Access Provision for a website term of service violation has resulted in charges in a complaint, information, or indictment. Lynch Depo. at 132-34.

13. Main Justice may not be made aware of every single plea agreement that prosecutors have obtained by using the Access Provision, including those in which defendants admitted to harmless terms of service violations. Lynch Depo. at 146; *see also id.* at 120-25, 128-29, 132-34.

14. The United States Attorneys' Offices do not always inform CCIPS of instances in which they consider prosecution under the Access Provision for a website term of service violation. Lynch Depo. at 122-23, 132-34.

15. The United States Attorneys' Offices do not always inform CCIPS of instances in which they bring charges in a complaint, information, or indictment under the Access Provision for a website term of service violation. Lynch Depo. at 123-25, 132-34.

16. The United States Attorneys' Offices do not always inform CCIPS of instances in which a defendant, as part of a plea agreement, admits to a violation of the Access Provision for a website term of service violation. Lynch Depo. at 123-24, 128-29, 132-34, 146.

17. The Department of Justice's 2014 Intake and Charging Policy for Computer Crime Matters, filed at ECF No.15-1 ("Charging Policy"), is the Department's current policy for charging CFAA violations. Affidavit of John T. Lynch, Jr., ECF No. 21-1 ("Lynch Affidavit") at ¶ 4 (Pl. Ex. 10); Lynch Depo. at 113.

18. The Department of Justice's current Intake and Charging Policy for Computer Crime Matters states that "if the defendant exceeded authorized access solely by violating an access restriction contained in a contractual agreement or term of service with an Internet service provider or website," prosecution under the Access Provision "may not be warranted." Charging Policy, ECF No. 15-1, at 4-5 (Pl. Ex. 11).

19. The Department of Justice's current Intake and Charging Policy for Computer Crime Matters does not foreclose federal prosecutors from seeking charges under the Access Provision for violations of website terms of service. Lynch Depo. at 143-44, 152-53 (referring to Lynch Affidavit at ¶ 9).

20. John T. Lynch, Jr., the Chief of the Computer Crime and Intellectual Property Section of the Criminal Division of the U.S. Department of Justice, does not believe that it is impossible that the Department of Justice would bring a prosecution for the terms of service violations that Plaintiffs intend to commit where those violations result in *de minimis* harm. Lynch Depo. at 149-54.

21. The Department of Justice does not consider that harmless terms of service violations mean that literally no harm arises out of the violation. Lynch Depo. at 40-41.

22. The Department of Justice considers harmless violations of the Access Provision to include situations where an employee violates an employer use policy, resulting in some loss of employee time or use of resources, but no significant monetary loss for the employer and no significant jeopardy for the employer's computer systems or networks. Lynch Depo. at 40-43.

23. The Department of Justice considers relatively minor terms of service violations to include some situations where someone lies on a website and causes third-party users of a website to be upset with a website for not presenting accurate profiles of individuals or where third-party users may choose not to use a website anymore. Lynch Depo. at 48-50.

24. The Department of Justice considers that there are some websites that have terms of service restrictions prohibiting providing false information where a violation of such a term of service might be trivial. Lynch Depo. at 45-46.

25. The Department of Justice has no interest in prosecuting harmless terms of service violations under the Access Provision. Lynch Depo. at 38-39.

Offline Discrimination Testing

26. In the offline world, audit testing has been used to seek evidence of discrimination in housing and employment contexts and such evidence has sometimes played a role in the enforcement of anti-discrimination laws, such as the Fair Housing Act ("FHA"), 42 U.S.C. § 3601 *et seq.*, and Title VII of the Civil Rights Act of 1964 ("Title VII"), 42 U.S.C. § 2000e *et seq.*, which prohibits discrimination in employment. Answer, ECF No. 26, at ¶¶ 3, 36 (referring to Complaint, ECF No. 1, at ¶¶ 3, 36).

27. Since the FHA's passage, explicit statements of racial discrimination by housing providers and their agents have become much rarer, but discriminatory treatment and steering persist. Answer, ECF No. 26, at ¶ 41 (referring to Complaint, ECF No. 1, at ¶ 41).

28. Audit testing can include pairing individuals of different races to pose as home- or job-seekers to determine whether they are treated differently. Answer, ECF No. 26, at ¶ 3 (referring to Complaint, ECF No. 1, at ¶ 3).

29. A comparison to the experiences of other renters and buyers may help elucidate whether discrimination has occurred and paired testing is one procedure that has been used for testing discrimination in housing. Answer, ECF No. 26, at ¶ 41 (referring to Complaint, ECF No. 1, at ¶ 41).

30. In a paired test, two people who are different with respect to the characteristic being tested (e.g., a white tester and a Black tester) pose as equally qualified homeseekers and make the same inquiry about available homes. Multiple pairs may be sent to test the same housing provider or real estate agency. Answer, ECF No. 26, at ¶ 42 (referring to Complaint, ECF No. 1, at ¶ 42).

31. Since the 1970s, the U.S. Department of Housing and Urban Development (“HUD”) has conducted a nationwide, comprehensive study of racial and ethnic discrimination in housing approximately once per decade. Answer, ECF No. 26, at ¶ 43 (referring to Complaint, ECF No. 1, at ¶ 43).

32. According to HUD’s study of housing discrimination published in 2013, HUD applied a paired-testing methodology in twenty-eight metropolitan areas and found that Black, Latino, and Asian testers were told about and shown fewer homes than white testers. U.S. Dep’t of Housing and Urban Dev., Off. of Policy Dev. and Research, *Housing Discrimination Against Racial and Ethnic Minorities 2012* (June 2013), at xi, xii,

http://www.huduser.gov/portal/Publications/pdf/HUD-514_HDS2012.pdf (hereinafter “HUD 2012 Study”) (Pl. Ex. 15).¹

33. Two techniques that may be used to test for employment discrimination are correspondence tests and audit studies. In a correspondence test, auditors submit two job applications for fictional applicants that vary only with respect to racial or gender signifiers or other protected characteristics. In an in-person audit study, pairs of real testers apply for jobs, presenting equal credentials. Answer, ECF No. 26, at ¶ 50 (referring to Complaint, ECF No. 1, at ¶ 50).

34. HUD has stated that researchers and/or testers in paired testing studies provide false information to the target of the testing. HUD 2012 Study, at 3 (stating that paired testing may “deceive[]” research subjects); U.S. Dep’t of Housing and Urban Dev., *An Estimate of Housing Discrimination Against Same-Sex Couples* (June 2013), at 9, https://www.huduser.gov/portal/Publications/pdf/Hsg_Disc_against_SameSexCpls_v3.pdf (hereinafter “HUD Same-Sex Couples Report”) (Pl. Ex. 16) (“First names and e-mail accounts were created for the e-mails from prospective gay male, lesbian, and heterosexual renters. In addition, names were created for partners of the gay male and lesbian renters and for spouses of the heterosexual renters.”).

35. Studies sponsored by HUD have stated that their paired testing involved providing false information to the target of the test. Urban Institute, *Discrimination in Metro.*

¹ To the extent necessary, this court may, pursuant to Fed. R. Evid. 201(b), take judicial notice of the existence of the documents cited in paragraphs 32, 34-39, and 55, *infra*, as well as the fact of their contents as described. See *Johnson v. Comm’n on Presidential Debates*, 202 F. Supp. 3d 159 (D.D.C. 2016) (noting that “judicial notice may be taken of public records and government documents available from reliable sources”); *Patel v. Shinseki*, 930 F. Supp. 2d 116, 121 n.8 (D.D.C. 2013) (taking judicial notice of government documents); see also Answer, ECF No. 26, at ¶ 6 (stating that the Complaint contains a “characterization of publications by the federal government, which speak for themselves and to which no response is required”).

Housing Markets: Phase 2 – Asians and Pacific Islanders, Final Report to U.S. Dep’t of Housing and Urban Dev. (March 2003), at i-iv,

https://www.huduser.gov/publications/pdf/phase2_final.pdf (Pl. Ex. 17) (noting that testers “were assigned income, assets, and debt levels to make them equally qualified to buy or rent the advertised housing unit” as well as “comparable family circumstances, job characteristics, education levels, and housing preferences”).

36. HUD has stated that as part of studies it has sponsored, false information provided to the target of a housing discrimination test can include the fact that the tester is seeking a home when the tester is not, in fact, seeking a home. HUD Same-Sex Couples Report, at 2 (stating that testers “pose as individuals seeking housing”); HUD 2012 Study, at 4 (noting that testing methodology imposes costs of “interacting with a fictitious customer” and “may invade the privacy rights of the person or office being tested”).

37. The Equal Employment Opportunity Commission (“EEOC”) has stated that false information provided to the target of an employment discrimination test can include the fact that the tester is seeking a job when the tester is not, in fact, seeking a job. U.S. Equal Emp’t Opportunity Comm’n, Notice, No. 915.002, at 1 (May 22, 1996), <https://www.eeoc.gov/policy/docs/testers.html> (hereinafter “EEOC 1996 Notice”) (Pl. Ex. 18) (“Testers are individuals who apply for employment which they do not intend to accept, for the sole purpose of uncovering unlawful discriminatory hiring practices.”).

38. HUD has stated that as part of studies it has sponsored, false information provided to the target of a housing discrimination test may include the qualifications of the tester to receive the home they are applying for. HUD 2012 Study, at 5 (“Minority and white testers . . . were assigned income, assets, and debt levels to make both testers unambiguously *well qualified*

for the representative sample of advertised units and to make the minority tester slightly better qualified.”).

39. The EEOC has stated that false information provided to the target of an employment discrimination test may include the qualifications of the tester to receive the job they are applying for. EEOC 1996 Notice, at 1 (“Testers are matched to appear equally qualified with respect to their employment histories, educational backgrounds, references, and other relevant factors.”).

Online Discrimination Testing

40. Transactions involving social goods covered by federal and state civil rights laws—e.g., housing, credit, and employment—are increasingly taking place online. Answer, ECF No. 26, at ¶¶ 5, 55 (referring to Complaint, ECF No. 1, at ¶¶ 5, 55).

41. “Cookies” and other technologies that identify users and devices can be employed by websites to store information conveyed by the browsing habits of a particular user. Answer, ECF No. 26, at ¶ 5 (referring to Complaint, ECF No. 1, at ¶ 5).

42. A “cookie” is a small piece of data sent from a web server to a user’s browser, stored there, and sent back from the browser on future requests to the same web server. Answer, ECF No. 26, at ¶ 59 (referring to Complaint, ECF No. 1, at ¶ 59).

43. The insertion of tracking cookies by websites and advertisers is possible if a user has not limited the use of cookies. Answer, ECF No. 26, at ¶ 59 (referring to Complaint, ECF No. 1, at ¶ 59).

44. If a user has not limited the use of cookies, users who use websites that allow them to create accounts may have their browsing, purchasing, or social media history tracked and

linked to their accounts. Answer, ECF No. 26, at ¶ 59 (referring to Complaint, ECF No. 1, at ¶ 59).

45. Tracking technologies, which allow websites and advertisers to compile records of individuals' browsing histories, allow for targeting. Answer, ECF No. 26, at ¶ 59 (referring to Complaint, ECF No. 1, at ¶ 59).

46. Tracking technologies make it possible for a website or advertiser to target users based on the user's browsing history. Answer, ECF No. 26, at ¶ 60 (referring to Complaint, ECF No. 1, at ¶ 60).

47. Website operators can use algorithms to analyze data generated by user activity on those sites, a practice often referred to as "analytics." Many websites engage in such analytics, and the practice has increased over time. Analytics enable companies to predict customer preferences, tailor services, and guide individualized marketing. Answer, ECF No. 26, at ¶ 6 (referring to Complaint, ECF No. 1, at ¶ 6).

48. Data analytics have allowed for new forms of targeted marketing. Consumer information is sometimes compiled from public records, websites, and retail loyalty card programs (among other sources) and sold for marketing purposes. The term "data broker" has been used to describe persons and entities engaged in such activities. Answer, ECF No. 26, at ¶ 56 (referring to Complaint, ECF No. 1, at ¶ 56).

49. Companies may develop models to categorize individual consumers and such models may imply inferences about the characteristics of the consumers placed in those models. Answer, ECF No. 26, at ¶ 57 (referring to Complaint, ECF No. 1, at ¶ 57).

50. Marketing models may be utilized for online marketing by websites and advertisers. Answer, ECF No. 26, at ¶ 58 (referring to Complaint, ECF No. 1, at ¶ 58).

51. Algorithms can be used to discern correlations in existing data sets and to make predictions. Answer, ECF No. 26, at ¶ 63 (referring to Complaint, ECF No. 1, at ¶ 63).

52. Underrepresentation of certain attributes in a data set can cause bias in a model generated by that data set, depending on the attributes the model seeks to measure or predict. Answer, ECF No. 26, at ¶ 65 (referring to Complaint, ECF No. 1, at ¶ 65).

53. “Machine learning” techniques may use “training data” from a variety of sources. The training data may itself change over time. Answer, ECF No. 26, at ¶ 66 (referring to Complaint, ECF No. 1, at ¶ 66).

54. Certain persons and groups have raised concerns that analytics could enable intentional or unintentional discrimination based on protected class status under civil rights laws. Answer, ECF No. 26, at ¶ 6 (referring to Complaint, ECF No. 1, at ¶ 6).

55. The federal government has repeatedly acknowledged the potential for analytics or algorithmic targeting to lead to discrimination against individuals based on their protected class status, such as race, gender, or age. *See* Exec. Off. of the President, *Big Data: A Report on Algorithmic Systems, Opportunity, and Civil Rights* (May 2016), at 7-10, 13, 15, https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/2016_0504_data_discrimination.pdf (Pl. Ex. 12); Fed. Trade Comm’n, *Big Data: A Tool for Inclusion or Exclusion?* (Jan. 2016), at iv, 8, 27-28, <https://www.ftc.gov/system/files/documents/reports/big-data-tool-inclusion-or-exclusion-understanding-issues/160106big-data-rpt.pdf> (Pl. Ex. 13); Exec. Off. of the President, *Big Data: Seizing Opportunities, Preserving Values*, at 45-47, 51-53 (May 2014), https://obamawhitehouse.archives.gov/sites/default/files/docs/big_data_privacy_report_may_1_2014.pdf (Pl. Ex. 14).

56. Advocates have argued for increased transparency regarding the functioning and use of algorithms. Answer, ECF No. 26, at ¶ 67 (referring to Complaint, ECF No. 1, at ¶ 67).

57. Outcomes-based audit testing is a method of testing that examines the outputs or outcomes of decision-making systems governed by an algorithm. Mislove Dec. at ¶ 6; *see* Wilson Dec. at ¶ 6.

58. Outcomes-based audit testing enables researchers to compare the content that is shown to different users online. Wilson Dec. at ¶ 7; Mislove Dec. at ¶ 7. Other types of outcomes-based audit testing may compare the decisions reached about website or platform users. Mislove Dec. at ¶ 7.

59. Outcomes-based audit testing is a way to determine whether users are experiencing discrimination in transactions covered by civil rights laws on the basis of their protected class status. Wilson Dec. at ¶ 8; Mislove Dec. at ¶ 8.

60. Without outcomes-based audit testing of certain online websites there may be no way to determine whether discrimination based on protected class status is occurring. Wilson Dec. at ¶ 9; Mislove Dec. at ¶ 9.

Plaintiffs' Research Plan

61. Plaintiffs are academics who intend to access or visit certain online hiring websites for purposes of conducting academic research regarding potential online discrimination. Wilson Dec. at ¶¶ 1, 10; Mislove Dec. at ¶¶ 1, 10.

62. Plaintiffs intend to study algorithmic discrimination in the employment context. They have designed and intend to conduct a study that would determine whether the algorithms used by some hiring websites produce results that discriminate against job seekers by race,

gender, or other characteristics. Wilson Dec. at ¶ 11; Mislove Dec. at ¶ 11. This study is referred to by the Plaintiffs as their “research plan.” *Id.*

63. Plaintiffs’ research plan involves studying online hiring websites that advertise employment opportunities, allow users to apply for employment opportunities, or allow employers or recruiters to view potential job candidates. Wilson Dec. at ¶ 12; Mislove Dec. at ¶ 12.

64. Plaintiffs’ research plan involves audit testing and related investigative work to determine whether online hiring websites’ algorithms treat users differently based on characteristics, such as race or gender, that constitute a protected class status under civil rights laws. Wilson Dec. at ¶ 13; Mislove Dec. at ¶ 13. Such differential treatment on the basis of protected class status is referred to by Plaintiffs as “online discrimination.” *Id.*

65. Online hiring websites may allow job seekers to create personal profiles, upload their resumes, and potentially apply for open positions. At the same time, companies and recruiters may post open positions onto these sites, and use the sophisticated tools the websites provide to screen candidates. Wilson Dec. at ¶ 14; Mislove Dec. at ¶ 14; Answer, ECF No. 26, at ¶ 108 (referring to Complaint, ECF No. 1, at ¶ 108).

66. Some hiring websites provide recruiters with a search engine-like interface that allows recruiters to query, filter, and browse all of the job seekers on the website. Like any search engine, these recruiter tools frequently use proprietary algorithms to rank job seekers. Wilson Dec. at ¶ 15; Mislove Dec. at ¶15; Answer, ECF No. 26, at ¶ 109 (referring to Complaint, ECF No. 1, at ¶ 109).

67. The order of the job seeker ranking may influence the next steps taken by the recruiter, including which job seekers are offered interviews or employment. Wilson Dec.

at ¶ 16; Mislove Dec. at ¶ 16; Answer, ECF No. 26, at ¶ 109 (referring to Complaint, ECF No. 1, at ¶ 109).

68. Plaintiffs seek to determine whether the ranking algorithms on online hiring websites produce discriminatory outputs by systematically ranking specific classes of people (e.g., people of color or women) below others. This could happen intentionally or inadvertently. Wilson Dec. at ¶ 17; Mislove Dec. at ¶ 17.

69. Plaintiffs' research plan will be an audit study that will test the hypothesis that hiring websites may produce discriminatory outputs by relying on data that includes real-world biases. For example, a hiring website could rank job candidates in search results in a racially disparate manner if the algorithm that determines which results are displayed takes into account factors—gleaned from a user's resume, browsing history, or social networking profiles—that correlate with race. Wilson Dec. at ¶ 18; Mislove Dec. at ¶ 18.

70. On each hiring website, Plaintiffs will investigate whether there are correlations between the rank ordering of job candidates in search results and race, gender, or age. If they observe that candidates with specific attributes are consistently ranked lower (when controlling for other confounding variables), this may indicate that the algorithm is discriminatory. Wilson Dec. at ¶ 19; Mislove Dec. at ¶ 19.

71. To investigate online discrimination in the employment context online, Plaintiffs will create profiles for fictitious job seekers, post fictitious job opportunities, and compare their fictitious users' rankings in a list of candidates for the fictitious jobs. The goal of this audit study is to examine how the websites rank the fictitious candidates for their fictitious jobs, and whether such ranking is influenced by race, gender, age, or other attributes. Wilson Dec. at ¶ 20; Mislove Dec. at ¶ 20.

72. Plaintiffs plan to create tester accounts reflecting fictitious users with varying attributes (e.g., race, gender, age). These accounts will always include one uniform, globally unique attribute (e.g., attendance at a fictitious high school) so that Plaintiffs can search for the fictitious users as distinct from genuine jobseekers. These tester accounts will then be used to search for fictitious jobs that Plaintiffs will post on the websites. Wilson Dec. at ¶ 21; Mislove Dec. at ¶ 21.

73. Plaintiffs will systematically conduct searches as the employers of the fictitious jobs they have posted (in other words, using tester employer accounts they have created), using the same keywords that were tested earlier, with the addition of a filter corresponding to the uniform attribute (e.g., the fictitious high school). This will ensure that the search results contain only the fictitious users. Wilson Dec. at ¶ 22; Mislove Dec. at ¶ 22.

74. By comparing the rankings of fictitious users with certain attributes to those without those attributes, Plaintiffs will be able to examine how specific user attributes such as race impact search rank. Wilson Dec. at ¶ 23; Mislove Dec. at ¶ 23.

75. Plaintiffs have designed their research plan to minimize any harm by limiting the number of concurrent tests that they run and deleting the job listings and job seeker accounts when they are done. Wilson Dec. at ¶ 24; Mislove Dec. at ¶ 24.

76. Plaintiffs have designed their research plan to minimize any effect on the target websites' operations by creating or using the minimum number of accounts necessary to conduct the study, including minimizing false accounts, and by avoiding sending too many service requests to a website or platform. Wilson Dec. at ¶ 25; Mislove Dec. at ¶ 25.

77. When Plaintiffs conduct an online study, they will typically rate limit their requests to a website to one every 10 to 30 seconds, to minimize any load on the website's servers. Wilson Dec. at ¶ 26; Mislove Dec. at ¶ 26.

78. Plaintiffs have designed their research plan to minimize any harm to third-party users of the websites by, among other things, making sure that real job seekers are unlikely to find, and discouraged from applying to, the fictitious jobs. Plaintiffs will also take steps to ensure their fictitious job seeker accounts are unlikely to appear in search results for real recruiters' reasonable search queries. Wilson Dec. at ¶ 27; Mislove Dec. at ¶ 27. For example, one method of discouraging interactions with real users is to state in any fictitious job posting, or in any fictitious job seeker profile, that the job or the job seeker is not real. Mislove Dec. at ¶ 27.

79. Plaintiffs intend to bring the results of this research to the public and to publish their findings in academic or conference papers. Wilson Dec. at ¶ 28; *see* Mislove Dec. at ¶ 28.

80. Plaintiffs have previously published the results of research into online discrimination in academic or conference papers. Wilson Dec. at ¶ 29; Mislove Dec. at ¶ 29.

81. Plaintiffs' research plan requires providing false information to the websites they study, including by making fictitious job postings. Wilson Dec. at ¶ 30; Mislove Dec. at ¶ 30.

82. Plaintiffs' research plan requires creating tester accounts using false or misleading information on the websites they study. Wilson Dec. at ¶ 31; Mislove Dec. at ¶ 31.

83. Creating tester accounts sometimes requires providing false information. Creating tester accounts sometimes does not require providing false information but may nonetheless constitute providing misleading information when it is in violation of website terms of service that require that anyone creating an account be a job seeker or an employer or be using the

website only for the purpose of finding a job or recruiting candidates for a job. Wilson Dec. at ¶ 32; Mislove Dec. at ¶ 32.

84. The methodology Plaintiffs intend to use in their research plan is standard within their research community as a means of audit testing for discrimination. Wilson Dec. at ¶ 33; Mislove Dec. at ¶ 33.

85. Plaintiffs' research plan requires providing false information to websites about the qualifications of fictitious job applicants in order to isolate the effect of the characteristic being studied, such as race or gender. Wilson Dec. at ¶ 34; Mislove Dec. at ¶ 34. No adequate alternative exists where research seeks to isolate the impact of a single such characteristic. *Id.*

86. Plaintiffs are aware that their research plan will violate target websites' terms of service prohibiting providing false information and/or creating accounts using false information. Wilson Dec. at ¶ 35; Mislove Dec. at ¶ 35.

87. Plaintiffs do not intend to seek permission from a target hiring website prior to conducting an algorithmic discrimination audit of that website. Wilson Dec. at ¶ 36; Mislove Dec. at ¶ 36.

88. Seeking permission from a target website prior to conducting an audit test for discrimination would affect the scientific validity of such research. Wilson Dec. at ¶ 37; Mislove Dec. at ¶ 37.

89. Once a company knows it is going to be audited or tested for potential discrimination, it can change its behavior for the time period of the test or research in a way that could affect the test or research findings. Wilson Dec. at ¶ 38; Mislove Dec. at ¶ 38.

90. The results of audit testing or academic research into online discrimination could expose a website to potential liability or embarrassment, and could require the company to spend money re-engineering its systems as a result. Wilson Dec. at ¶ 39; Mislove Dec. at ¶ 39.

91. Plaintiff Christo Wilson described his intention to conduct the proposed research plan in his application for a National Science Foundation (“NSF”) CAREER grant, which he submitted in 2015. Wilson Dec. at ¶ 40.

92. Plaintiff Christo Wilson’s CAREER grant application listed certain hiring websites and/or platforms that he and Plaintiff Mislove intend to access in the future for purposes of conducting the research plan, but the list of websites was not exhaustive. Wilson Dec. at ¶ 41.

93. Plaintiff Wilson received the NSF CAREER grant, which is intended to fund research over the course of five years. Wilson Dec. at ¶ 42.

94. The platforms and/or websites in the employment or hiring industry change rapidly, and the practicability of auditing them may also vary, such that Plaintiffs cannot now identify all such platforms and/or websites that they will access in the future for purposes of conducting the research plan. Wilson Dec. at ¶ 43; Mislove Dec. at ¶ 40.

95. Terms of service may be subject to change at any time, without notice to users, and without a record provided to users of what terms of service were operative on each and every visit they made to a website. Wilson Dec. at ¶ 44; Mislove Dec. at ¶ 41.

96. Plaintiffs do not have a record of the terms of service that were operative on each and every visit they made to a website during the course of their past research. Wilson Dec. at ¶ 45; Mislove Dec. at ¶ 42.

97. Plaintiffs have designed their research plan to have at most a *de minimis* impact, if any, on the target websites’ operations. Wilson Dec. at ¶ 46; Mislove Dec. at ¶ 43.

98. Plaintiffs have designed their research plan to have at most a *de minimis* impact, if any, on third-party users. Wilson Dec. at ¶ 47; Mislove Dec. at ¶ 44.

99. Plaintiffs have designed their research plan such that false or misleading speech during the course of creating fictitious accounts or postings will not cause material harm to the target websites' operations because it will have a *de minimis* impact, if any, on the target websites' operations. Wilson Dec. at ¶ 48; Mislove Dec. at ¶ 45.

100. Plaintiffs' intention in providing false or misleading speech to websites they study as part of their research plan is to conduct academic research into online discrimination. Wilson Dec. at ¶ 49; Mislove Dec. at ¶ 46.

101. Plaintiffs' intention in providing false or misleading speech to websites they study as part of their research plan is to determine whether online hiring websites use algorithms whose results discriminate against job seekers by race, gender, or other protected class status under civil rights laws. Wilson Dec. at ¶ 50; Mislove Dec. at ¶ 47.

102. As part of their research plan, Plaintiffs do not intend to access any data or information on the websites they study that is not made available to the public or to any individual who creates an account on the site. Wilson Dec. at ¶ 51; Mislove Dec. at ¶ 48.

103. Plaintiffs are concerned that violating terms of service in the course of the research plan will subject them to criminal prosecution under the Access Provision. Wilson Dec. at ¶ 52; Mislove Dec. at ¶ 49.

104. Plaintiffs do not wish to be exposed to criminal prosecution as a result of conducting the research plan to study online discrimination. Wilson Dec. at ¶ 55; Mislove Dec. at ¶ 51.

105. Plaintiffs intend to engage in the research plan because they believe that it will have significant social value. First, individual algorithm audits may uncover harmful discriminatory practices that, once exposed, will force the relevant parties to change their behavior. This may also deter other organizations from using similar algorithms. Second, Plaintiffs' research findings will aid academics and regulators who wish to expand on Plaintiffs' findings or conduct their own audits. Finally, by educating computer scientists and the general public about the phenomenon of intentional or unintentional algorithmic discrimination, Plaintiffs hope to inform an important societal debate about the role and norms of algorithms in daily life. Wilson Dec. at ¶ 56; Mislove Dec. at ¶ 52.

Dated: March 7, 2019

Respectfully submitted,

/s/ Esha Bhandari

Esha Bhandari
Naomi Gilens
Rachel Goodman
American Civil Liberties Union
Foundation
125 Broad St., 18th Floor
New York, NY 10004
Tel: 212-549-2500
Fax: 212-549-2654
ebhandari@aclu.org
ngilens@aclu.org
rgoodman@aclu.org

Arthur B. Spitzer (D.C. Bar No. 235960)
aspitzer@acludc.org
Scott Michelman (D.C. Bar No. 1006945)
smichelman@acludc.org
American Civil Liberties Union
of the Nation's Capital
915 15th Street, N.W., Second Floor
Washington, D.C. 20005
Tel: 202-457-0800
Fax: 202-457-0805

Attorneys for Plaintiffs