

Alicia L. Nobles, PhD

Appointments (Research & Professional)

Assistant Professor Division of Infectious Diseases and Global Public Health, Department of Medicine University of California San Diego	2020 - Current
Co-Founder Center for Data-Driven Health, Qualcomm Institute University of California San Diego	2019 - Current
Postdoctoral Fellow Division of Infectious Diseases and Global Public Health, Department of Medicine University of Virginia	2018 - 2020
Visiting Scholar John C. Malone Center for Engineering in Healthcare & Dept of Computer Science Johns Hopkins University	2018
Graduate Fellow Department of Systems & Information Engineering, Department of Civil Engineering University of Virginia	2012 - 2018
Civil Engineer Environmental Services CH2M	2008 - 2012

Education

PhD, Systems & Information Engineering, Raven Society University of Virginia Dissertation: Mining User-Generated Data to Examine Online Information Seeking for Reproductive and Sexual Health	2018
MS, Civil Engineering University of Virginia	2014
BS, Civil Engineering, Summa Cum Laude Georgia Tech	2007

Grants and Fellowships

PI: "Real-Time Population Mental Health Tracking During the COVID-19 Pandemic" Tobacco Related-Disease Research Program (TRDRP) Amount: \$195,000	2020 - 2021
PI: "Quantifying Treatment Help-Seeking Among Self-Identified Opioid Users on Social Media" NIH National Institute on Drug Abuse (NIDA) Amount: \$946,580	2020 - 2025
PI: "Rapid Examination of Collateral Threats to Population Behavioral Health during the COVID-19 Pandemic" University of California - Office of the President Amount: \$25,000	2020

Co-I: “Californians Talk HIV Using Social Media to Get Steps Ahead” California HIV Research Program Amount: \$2,662,766	2018-2021
PI: “Quantifying and Contextualizing Personally Identifiable Information on Social Media” Fordham University HIV and Drug Abuse Prevention Research Ethics Training Institute (RETI) Amount: \$20,000	awarded but declined
Trainee: Substance Use, HIV, and Related Infections Training Grant (NIH T32) Div of Infectious Diseases & Global Public Health, Dept of Medicine, UC San Diego	2018 - 2020
Fellow: StatLab Fellowship Library Research Data Services & Sciences, University of Virginia Amount: \$6,400	2017 - 2018
Fellow: Teaching Fellowship School of Engineering and Applied Science, University of Virginia Amount: \$9,000	2017
PI: “Health Insurance Literacy of College Students” Double Hoo Grant, Center for Undergraduate Excellence, University of Virginia Amount: \$4,809	2017 - 2018
Trainee: Transdisciplinary Big Data Science Training Grant (NIH T32) Dept of Biomedical Engineering, University of Virginia	2016 - 2017
PI: “Predicting Imminent Suicide Risk using Text Messages in Real-Time” Presidential Fellowship in Data Science, Data Science Institute, University of Virginia Amount: \$25,000	2015 - 2016
Co-Author & Sole Supporting Grad Student: “Evaluating the Cost-Effectiveness of Water Quality Trading for Stormwater Management” Virginia Transportation Research Council Grant, Virginia Transportation Research Council Amount: \$102,901	2014 - 2015
Fellow: Olive B. and Franklin C. Mac Krell Jefferson Fellowship Jefferson Scholars Foundation Amount: \$120,000	2012 - 2017
Fellow: Commonwealth Fellowship in Engineering School of Engineering and Applied Science, University of Virginia Amount: \$32,500	2012 - 2013

Publications

* Conference proceedings are the primary peer-reviewed publication venue in computer science and similar in rigor to journals.

1. Mueller, Wood-Doughty, Amir, Dredze, **Nobles**. 2021. Demographic Representation and Collective Storytelling in the Me Too Twitter Hashtag Activism Movement. Proc of ACM Computer-Supported Cooperative Work and Social Computing (CSCW).
2. Sawhney,* Joshi,* **Nobles**,* Shah. 2021. Towards Emotion- and Time-Aware Classification of Tweets to Assist Human Moderation for Suicide Prevention. Proc of AAAI Conference on Web and Social Media (ICWSM). *equal contribution
3. Leas, Moy, **Nobles**, Ayers, Zhu, Purushothaman. 2021. Google shopping queries for vaping products, JUUL, IQOS during the E-cigarette, or Vaping, product use Associated Lung Injury (EVALI) outbreak.
4. Ayers, Poliak, Johnson, Leas, Dredze, Caputi, **Nobles**. 2021. Suicide-related internet searches during the early stages of

the COVID-19 pandemic in the US. JAMA Network Open.

5. Leas, Hendrickson, **Nobles**, Todd, Smith, Dredze, Ayers. 2020. Self-reported Cannabidiol (CBD) Use for Conditions With Proven Therapies. JAMA Network Open.
6. Leas, **Nobles**, Caputi, Dredze, Zhu, Cohen, Ayers. 2020. News coverage of the E-cigarette, or Vaping, product use Associated Lung Injury (EVALI) outbreak and internet searches for vaping cessation. Tobacco Control.
7. Ayers, Leas, Johnson, Poliak, Althouse, Dredze, **Nobles**. 2020. Internet Searches for Acute Anxiety During the Early Stages of the COVID-19 Pandemic. JAMA Internal Medicine.
8. Chu, Fathy, **Nobles**, Lipoff. 2020. Patient crowdsourcing of dermatologic consults on a Reddit social media community. Journal of the American Academy of Dermatology.
9. Glenn, **Nobles**, Barnes, Teachman. 2020. Can Text Messages Identify Suicide Risk in Real Time? A Within-Subjects Pilot Examination of Temporally-Sensitive Markers of Suicide Risk. Clin Psychol Sci.
10. **Nobles**, Leas, Dredze, Ayers. 2020. Examining Peer-to-Peer and Patient-Provider Interactions on a Social Media Community Facilitating Ask the Doctor Services. Proc of AAAI Conference on Web and Social Media (ICWSM).
11. **Nobles**, Leas, Latkin, Dredze, Strathdee, Ayers. 2020. #HIV: Alignment of HIV-Related Visual Content on Instagram with Public Health Priorities in the US. AIDS and Behavior.
12. **Nobles**, Leas, Noar, Dredze, Strathdee, Ayers. 2020. Automated Image Analysis of Instagram Posts: Implications for Risk Perception and Communication in Public Health using a Case Study of #HIV. PLoS ONE.
13. **Nobles**, Leas, Caputi, Zhu, Strathdee, Ayers. 2020. Responses to Addiction Help-Seeking from Alexa, Siri, Google Assistant, Cortana, and Bixby Intelligent Virtual Assistants. Nature Digital Medicine.
14. Leas, Prochaska, Ayers, **Nobles**, Henrikson. 2020. What to do when tobacco advertisers co-opt anti-tobacco social media campaigns to sell tobacco. Tobacco Control.
15. **Nobles**, Leas, Althouse, Dredze, Longhurst, Smith, Ayers. 2019. Requests for Diagnoses of Sexually Transmitted Diseases on a Social Media Platform. JAMA.
16. Leas, **Nobles**, Caputi, Ayers. 2019. Trends in Internet Searches for Cannabidiol (CBD) in the United States. JAMA Open.
17. Strathdee, **Nobles**, Ayers. 2019. Harnessing Digital Data and Data Science to Achieve 90-90-90 Goals to End the HIV Epidemic. Current Opinion in HIV and AIDS.
18. **Nobles**, Dredze, Ayers. 2019. "Repeal and Replace": Increased Demand for Intrauterine Devices Following the 2016 Presidential Election. Contraception.
19. Ayers, **Nobles**, Dredze. 2019. Media Trends for SAMHSA's 800-662-HELP Addiction Treatment Referral Services Following a Celebrity Overdose. JAMA Intern Med.
20. **Nobles**, Curtis, Ngo, Vardell, Holstege. 2019. Health Insurance Literacy of College Students: A Mixed Methods Analysis. J Am Coll Health.
21. Caputi, **Nobles**, Ayers. 2019. Internet Searches for Sexual Harassment and Assault, Reporting, and Training Following #MeToo. JAMA Intern Med.
22. **Nobles**, Dreisbach, Keim-Malpass, Barnes. 2018. "Is this a STD? Please help!": Online Information Seeking for STDs on Reddit. Proc of AAAI Conference on Web and Social Media (ICWSM).
23. **Nobles**, Glenn, Kowsari, Teachman, Barnes. 2018. Identification of Imminent Suicide Risk Among Young Adults using Text Messages. Proc of ACM Conference on Human Factors in Computing Systems (CHI).
24. Boukhechba, Bae, **Nobles**, Gong, Wells, Barnes. 2018. A social cognitive theory-based framework for monitoring medication adherence applied to endocrine therapy in breast cancer survivors. Proc of IEEE EMBS International

Conference on Biomedical & Health Informatics (BHI).

25. **Nobles**, Goodall, Fitch. 2017. Comparing the Cost of Onsite Best Management Practices to Nutrient Credit Offsets for Stormwater Management: Case Study for VDOT. JAWRA.
26. **Nobles**, Vilankar, Wu, Barnes. 2015. Evaluation of Data Quality of Multisite Electronic Health Record Data for Secondary Analysis. Proc of IEEE Conference on Big Data.
27. **Nobles**, Goldstein, Goodall, Fitch. 2014. Investigating the Cost Effectiveness of Nutrient Credit Use as an Option for VDOT Stormwater Permitting Requirements. FHWA/VCTIR 15-R9 Report 15-R9.

Presentations and Invited Talks

1. Chu, Fathy, **Nobles**, Lipoff. 2020. Crowdsourcing dermatologic consults on a Reddit community. Association for Healthcare Social Media. Philadelphia, PA. *AHSM 2020 Best Abstract Award* (conference presentation)
2. **Nobles**. 2020. Pulling Back the Curtain on the Research Process. Lean In San Diego. (invited talk)
3. **Nobles**. 2020. Ethics of Online Research. PyData San Diego. (invited talk)
4. **Nobles**. 2019. Using Social Media to Obtain a Crowd-Diagnosis. Promoting Research in Social Media and Health Symposium (PRISM). (symposium poster)
5. **Nobles**. 2018. "Is this a STD? Please help!": Online Information Seeking for Sexually Transmitted Diseases. Dept of Engineering Management & Systems Engineering, George Washington University. (invited seminar talk)
6. **Nobles**. 2018. "Is this a STD? Please help!": Online Information Seeking for Sexually Transmitted Diseases. Division of Infectious Disease and Global Public Health, University of California San Diego. (invited seminar talk)
7. **Nobles**, Dreisbach, Keim-Malpass, Barnes. 2018. "Is this a STD? Please help!": Online Information Seeking for STDs on Reddit. Proc of AAAI Conference on Web and Social Media (ICWSM) Stanford, CA. (conference poster)
8. **Nobles**, Glenn, Kowsari, Teachman, Barnes. 2018. Identification of Imminent Suicide Risk Among Young Adults using Text Messages. Proc of ACM Conference on Human Factors in Computing Systems (CHI). Montreal, Québec. (conference presentation)
9. **Nobles**. 2017. Health Insurance Literacy of College Students: Implications for the Student Health Insurance Plan. Institutions in Context: Healthcare Institutions and Policy. Tampere, Finland. (workshop presentation)
10. **Nobles**, Curtis, Ngo, Holstege. 2017. Health Insurance Literacy of College Students. 2017 ACHA Annual Meeting. Austin, TX. (conference poster)
11. **Nobles**, Glenn, Teachman, Barnes. 2017. Novel Methods to Predict Suicide Attempts by Young Adults using Personal Communication and Social Media Data. 2nd Symposia on Computing and Mental Health, SIGCHI Conf Hum Factor Comput Syst (CHI-17). Denver, CO. (workshop poster)
12. **Nobles**, Curtis, Ngo, Holstege. 2017. Health Insurance Literacy of College Students. 2017 Curry Research Conference. Charlottesville, VA. (conference presentation)
13. Glenn, **Nobles**, Barnes, Teachman. 2016. Utilizing Machine Learning Techniques to Improve Prediction and Prevention of Suicide and Self-Injury. 2016 ABCT. New York City, NY. (conference presentation)
14. **Nobles**, Vilankar, Wu, Barnes. 2015. Evaluation of Data Quality of Multisite Electronic Health Record Data for Secondary Analysis. Proc of IEEE Conference on Big Data. San Jose, CA. (conference presentation)
15. **Nobles**, Goldstein, Goodall, Fitch. 2015. Investigating the Cost-Effectiveness of Nutrient Credit Use as an Option for VDOT Stormwater Permitting Requirements. 2015 TRB Annual Meeting. Washington, D.C. (conference presentation)
16. Convers, Newman, **Nobles**. 2007. An Improved Global Energy to Moment Ratio Catalog: More Events, Stations, and Rupture Durations. Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract S52B-02. (conference poster)

Workshops Organized

1. Pater, **Nobles**, Gilbert, Zimmer, Fiesler. 2020. Data is People. AAAI Conference on Web and Social Media (ICWSM).

Teaching Experience

Instructor

Linear Statistical Models (co-listed undergraduate/graduate) Fall 2017

- Received award for All University Teaching Award for exceptional teaching for co-listed class of 118 students. Awardees are top 5% of teachers across the entire university.

Teaching Assistant

Systems Integration (graduate) Spring 2018

Calculus II (undergraduate) Fall 2014, Spring 2015, Spring 2018

Guest Lecturer

“Intersection of Digital Technology & Stigmatized Health,” Winter 2021
Technology and Precision Health for Public Good (graduate)

“Exploring New Tensions & Challenges in Social Media Research,” Winter 2020
Ethics in Public Health Research & Practice (graduate)

“Health Insurance Literacy,” Healthcare for the consumer (undergraduate) Spring 2016

Pedagogical Training

Tomorrow’s Professor Today 2017 - 2019

- Competitive two-year program that focuses on pedagogy.

Professional Experience

Civil Engineer 2008 - 2012
Environmental Services
CH2M

- Managed large-scale \$8 million groundwater remediation projects including design, permitting, staffing, report preparation, and public relations.
- Managed budget, staffing, and schedule for 44 environmental investigation sites in US and Caribbean. Authored 44 reports in less than 3 weeks saving \$20,000 of a \$60,000 budget coordinating with personnel in 10+ offices. Authored proposal that was awarded \$1.2 million for follow-up investigation.
- Onsite quality assurance manager for a \$90 million large-scale, multi-site environmental remediation in a low resource environment in Caribbean.
- Created standardized data collection plan template and trained a small business to use the template for 21 sites on a \$40 million small business joint venture.

Mentoring

*Outstanding mentee evaluations during first academic performance review.

Wayne Kepner, PhD in progress (Interdisciplinary Research On Substance Use), University of California San Diego <i>Using Digital Social Support to Navigate the Stigma of Treatment of Opioid Use Disorder (UCSD)</i>	2020
Emily Bunce, BA (Linguistics), California State University Long Beach <i>Review of Topic Models in Health Social Media Research (UCSD)</i>	2020
Clara Baek, BS in progress (Biology), University of California San Diego <i>Review of Topic Models in Health Social Media Research (UCSD)</i>	2020
Brian Chu, MD in progress (Medicine) at University of Pennsylvania <i>Requests for Dermatologic Information on Social Media (UCSD)</i>	2020
Aaron Mueller, PhD in progress (Computer Science) at Johns Hopkins University <i>Representation in the #MeToo Movement on Twitter (UCSD)</i>	2020
Derek Johnson, postdoc (Public Health) at University of California San Diego <i>Social Media Monitoring for HIV and Substance Use (UCSD)</i>	2020
Ashli Perkins, MA (Global Public Health) at University of California San Diego <i>Leveraging Social Media for Physician Education (UCSD)</i>	2020
An Ran Chen, PhD in progress (Mathematics) at University of California San Diego <i>Using Google Trends to Predict Patterns in Population Mental Health (UCSD)</i>	2020
Dylan Hazlett, BS (Engineering) at University of Virginia <i>Online Reproductive Health Information Seeking</i>	2017 - 2018
Brett Curtis, BS (Education) at University of Virginia <i>Health Insurance Literacy</i>	2016 - 2018
Hillary Goldstein, BA (Economics) at University of Virginia <i>Nutrient Credit Trading</i>	2013 - 2014
Mentored multiple junior engineers in industry at CH2M	2008 - 2012

Honors & Awards

Research

Altmetric Top 5% of All Research Outputs

NSF Graduate Research Fellowship (honorable mention)

Professional

New Faces of Engineering (nomination)

Beyond Performance (4 times)

Teaching

All University Teaching Award at University of Virginia

Relevant Training

Courses

- agent based models
- big data in health
- computational research
- data mining
- epidemiology
- environmental epidemiology
- GIS
- US health policy
- linear statistical models
- machine learning
- optimization
- research ethics
- stochastic modeling
- text mining

Workshops

Big Data Coursework for Computational Medicine (Weill Cornell Medicine)

Healthcare Data Analytics (Oregon Health & Science University)

Institutions in Context: Healthcare (University of Tampere)

Catalyzing Advocacy in Science and Engineering (AAAS)

Training Grants

Transdisciplinary Big Data Science (NIH T32; Division of Infectious Diseases & Global Public Health, Dept of Medicine, University of California San Diego)

Substance Use, HIV, and Related Infections (NIH T32; Dept of Biomedical Engineering, University of Virginia)

Service

Outside University

Journal Reviewer for JAMA, AJPH, AMIA, CSCW, ICWSM, Substance Abuse	Current
Speaker Selection Committee: Women in Data Science San Diego Conference	2020
Student Volunteer: AMIA Symposium	2016 - 2017
Mentor: Computers 4 Kids	2014 - 2016
Pharmacy Tech/Exit Interview Volunteer: Charlottesville Free Clinic	2013 - 2014

Inside University

Graduate Student Representative: Student Health Insurance Committee	2012 - 2018
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