Salvatore Giorgi

CONTACT INFORMATION	sal.giorgi@gmail.com (267) 312-3734	www.salvatoregiorgi.com github.com/sjgiorgi

RESEARCH INTERESTS

Machine learning applications to substance use and recovery, measuring relationships between individuals and their communities through language

EDUCATION

University of Pennsylvania, Philadelphia, Pennsylvania

Ph.D., Computer Science, 2023 (expected)
Advisors: H. Andrew Schwartz and Lyle Ungar
Title: Multi-level methods for estimating community language from social media with user and community socio-demographics

Temple University, Philadelphia, Pennsylvania

Master of Science, Electrical Engineering, 2014
Bachelor of Science, Electrical Engineering, 2012

Community College of Philadelphia, Philadelphia, Pennsylvania

Associate in Science, Engineering, 2009
Associate in Science, Mathematics, 2009

RESEARCH

Computer Systems Analyst, *TTRU*	2020 - Present
Senior Data Scientist, *World Well Being Project, University of Pennsylvania*	2015 - 2020
Software Developer, *Linguistic Data Consortium, University of Pennsylvania*	2014 - 2015
Research Assistant, *CSNAP Laboratory, Temple University*	2011 - 2014

PUBLICATIONS

1. **Giorgi, S.***, Markowitz, D.*, Soni, N., Varadarajan, V., Mangalik, S., and Schwartz, H.A., *"I Slept Like a Baby": Using Human Traits To Characterize Intentionally Deceptive Human Text and Inherently Deceptive ChatGPT Text.* IACT, 2023

2. Barriere, V., Sedoc, J., Tafreshi, S., **Giorgi, S.** *Findings of WASSA 2023 Shared Task on Empathy, Emotion and Personality Detection in Conversation and Reactions to News Articles.* Proceedings of the 13th Workshop on Computational Approaches to Subjectivity, Sentiment & Social Media Analysis, 2023

3. **Giorgi, S.**, Yaden, D.B., Eichstaedt, J.C., Ungar, L.H., Schwartz, H.A., Kwarteng, A., and Curtis, B. *Predicting U.S. County Opioid Poisoning Mortality From Multi-Modal Social Media and Psychological Self-Report Data.* Scientific Reports, 2023

4. Curtis, B., **Giorgi, S.**, Ungar, L., Vu, H., Yaden, D., Liu, T., Yadeta, K., and Schwartz, H.A. *AI-based Analysis of Social Media Language Predicts Addiction Treatment Dropout at 90 Days.* Neuropsychopharmacology, 2023

5. Gray, A., Liu, T., **Giorgi, S.**, Fisher, C. B., and Curtis, B. *Differences in Mental Health and Alcohol Use Across Profiles of COVID-19 Disruptions.* Alcohol and Alcoholism, 2023

6. **Giorgi, S.**, Zhao, K., Feng, A.H., and Martin, L.J., *Author as Character and Narrator: Deconstructing Personal Narratives from the r/AmITheAsshole Reddit Community*, ICWSM, 2023

7. Liu, T.*, **Giorgi, S.***, Tao, X., Guntuku, S.C., Bellew, D., Curtis, B., and Ungar, L.H., *Different Affordances on Facebook and SMS Text Messaging Do Not Impede Generalization of Language-Based Predictive Models*, ICWSM, 2023

8. Aggarwal, A., Rai, S., **Giorgi, S.**, Havaldar, S., Sherman, S., Mittal, J., and Guntuku, S.C., *A Cross-Modal Study of Pain Across Communities in the United States*, SocialNLP, 2023

9. Turpin, R., **Giorgi, S.**, and Curtis, B., *Pandemic Distress Associated with Segregation and Social Stressors*, Frontiers in Public Health, 2023 in press

10. Habib, D., **Giorgi, S.**, and Curtis, B., *Role of the Media in Promoting the Dehumanization of People Who Use Drugs*, The American Journal of Drug and Alcohol Abuse, 2023 in press

11. Yaden, D.*, **Giorgi, S.***, Jordan, M., Buffone, A., Eichstaedt, J.C., Schwartz, H.A., Ungar, L.H., Bloom, P., *Characterizing Empathy and Compassion Using Computational Linguistic Analysis.* Emotion, 2023 in press

12. Kjell, O., **Giorgi, S.**, Schwartz, H.A., *The Text-Package: An R-Package for Analyzing and Visualizing Human Language Using Natural Language Processing and Transformers*, Psychological Methods, 2023 in press

13. Matero, M., **Giorgi, S.**, Curtis, B., Ungar, L.H., Schwartz, H.A., *Opioid Death Projections with AI-based Forecasts using Social Media Language.* Nature Digital Medicine, 2023

14. Lou, S.*, **Giorgi, S.***, Liu, T., Eichstaedt, J.C., Curtis, B., *Measuring Disadvantage: A Systematic Comparison of United States Small-Area Disadvantage Indices.* Health and Place, 2023

15. Levanti, D., Monastero, R.N., Zamani, M., Eichstaedt, J.C., **Giorgi, S.**, Schwartz, H.A., Meliker, J.R., *Depression and anxiety on Twitter during the COVID-19 stay-at-home period in seven major US cities*, AJPM Focus, 2023

16. Tao, X., Liu, T., Fisher, C.B., **Giorgi, S.**, Curtis, B., *COVID-related social determinants of substance use disorder among diverse US racial ethnic groups*, Social Science & Medicine 2022

17. **Giorgi, S.**, Lynn, V., Gupta, K., Ahmed, F., Matz, S., Ungar, L.H., and Schwartz, H.A., *Correcting Sociodemographic Selection Biases for Population Prediction from Social Media*, ICWSM 2022

18. **Giorgi, S.**, Guntuku, S.C., Himelein-Wachowiak, K., Kwarteng, A., Hwang, S., Rahman, M., and Curtis, B., *Twitter Corpus of the #BlackLivesMatter Movement and Counter Protests: 2013 to 2021*, ICWSM 2022

19. **Giorgi, S.**, Himelein-Wachowiak, M., Habib, D., Ungar, L.H., and Curtis, B., *Nonsuicidal Self-Injury and Substance Use Disorders: A Shared Language of Addiction*, CLPsych 2022

20. Bragard, E., **Giorgi, S.**, Juneau, P., and Curtis, B., *Daily diary study of loneliness, alcohol, and drug use during the COVID-19 Pandemic*, Alcoholism: Clinical and Experimental Research (ACER) 2022

21. Liu, T., **Giorgi, S.**, Yadeta, K., Schwartz, H.A., Ungar, L.H., and Curtis, B., *Linguistic predictors from Facebook postings of substance use disorder treatment retention versus discontinuation*, The American Journal of Drug and Alcohol Abuse 2022

22. van Loon, A., **Giorgi, S.**, Willer, R., and Eichstaedt, J.C., *Negative Associations in Word Embeddings Predict anti-Black Bias Across Regions–but only via Name Frequency*, ICWSM 2022

23. Vu, H., **Giorgi, S.**, Clifton, J., Balasubramanian, H., and Schwartz, H.A., *Modeling Latent Dimensions of Human Beliefs*, ICWSM 2022

24. Himelein-Wachowiak, M., **Giorgi, S.**, Kwarteng, A., Schriefer, D., Smitterberg, C., Yadeta, K., Bragard, E., Devoto, A., Ungar, L.H., and Curtis, B., *Getting "clean" from nonsuicidal self-injury: Experiences of addiction on the subreddit r/selfharm*, Journal of Behavioral Addictions 2022

25. Jose, R., Matero, M., Sherman, G., Curtis, B., **Giorgi, S.**, Schwartz, H.A., and Ungar, L.H., *Using Facebook language to predict and describe excessive alcohol use*, Alcoholism: Clinical and Experimental Research (ACER) 2022

26. Franco, O., Calkins, M., **Giorgi, S.**, Ungar, L.H., Gur, R., Kohler, C., and Tang, S., *Feasibility of Mobile Health and Social MediaBased Interventions for Young Adults With Early Psychosis and Clinical Risk for Psychosis: Survey Study*, JMIR Form Res 2022

27. **Giorgi, S.**, Nguyen, K.L., Eichstaedt, J.C., Kern, M.L., Yaden, D.B., Seligman, M.E.P., Ungar, L.H., Schwartz, H.A., and Park, G., *Regional Personality Assessment through Social Media Language*, Journal of Personality 2021

28. **Giorgi, S.**, Ungar, L.H., and Schwartz, H.A., *Characterizing Social Spambots by their Human Traits*, ACL Findings 2021

29. **Giorgi, S.**, Guntuku, S.C., Eichstaedt, J.C., Pajot, C., Schwartz, H.A., and L.H., *Well-Being Depends on Social Comparison: Hierarchical Models of Twitter Language Suggest That Richer Neighbors Make You Less Happy*, ICWSM 2021

30. **Giorgi, S.**, Zavarella, V., Tanev, H., Stefanovitch, N., Hwang, S., Hettiarachchi, H., Ranasinghe, T., Kalyan, V., Tan, P., Tan, P., Andrews, M., Hu, T., Stoehr, N., Ignazio Re, F., Vegh, D., Atzenhofer, D., Curtis, B., and Hurriyetoglu, A., *Discovering Black Lives Matter Events in the United States: Shared Task 3, CASE 2021*, Challenges and Applications of Automated Extraction of Socio-political Events from Text (CASE) 2021

31. Eichstaedt, J.C., Sherman, G.T., **Giorgi, S.**, Roberts, S. O., Reynolds, M. E., Ungar, L. H., and Guntuku, S. C. *The emotional and mental health impact of the murder of George Floyd on the US population, PNAS* 2021

32. Himelein-Wachowiak, M., **Giorgi, S.**, Devoto, A., Rahman, M., Ungar, L.H., Schwartz, H.A., Epstein, D.H., Leggio, L., and Curtis, B., *Bots and misinformation spread on social media: A mixed scoping review with implications for COVID-19*, JMIR 2021

33. Yaden, D.B., **Giorgi, S.**, Kern, M.L., Adler, A., Ungar, L.H., Seligman, M.E.P., and Eichstaedt, J.C., *Beyond beliefs: Multidimensional Aspects of Religion and Spirituality in Language*, Psychology of Religion and Spirituality 2021

34. Jaidka, K., Eichstaedt, J.C., **Giorgi, S.**, Schwartz, H. A., and Ungar, L.H., *Information-seeking vs. sharing: Which explains regional health? An analysis of Google Search and Twitter trends*, Telematics and Informatics 2021

35. Zamani, M., Schwartz, H.A., Eichstaedt, J., Guntuku, S.C., Ganesan, A.V., Clouston, S., **Giorgi, S**, *Understanding Weekly COVID-19 Concerns through Dynamic Content-Specific LDA Topic Modeling*, NLP+CSS 2020

36. **Giorgi, S**, Yaden, D.B., Eichstaedt, J.C., Ashford, R.D., Buffone, A., Schwartz, H.A., and Ungar, L.H., *Cultural Differences in Tweeting about Drinking Across the U.S.*, International Journal of Environmental Research and Public Health 2020

37. Abebe, R.*, **Giorgi, S.***, Tedijanto, A., Buffone, A.E.K., Schwartz, H.A., *Quantifying Community Characteristics of Maternal Mortality Using Social Media*, The Web Conference 2020

38. Jaidka, K., **Giorgi, S**, Schwartz, H.A., Kern, M.L., Ungar, L.H., and Eichstaedt, J.C., *Estimating geographic subjective well-being from Twitter: A comparison of dictionary and data-driven language methods.*, PNAS 2020

39. Eichstaedt, J. C., Kern, M. L., Yaden, D. B., Schwartz, H. A., **Giorgi, S.**, Park, G., Hagan, C.A., Tobolsky, V., Smith, L. K., Buffone, A., Iwry, J., Seligman, M. E. P., and Ungar, L. H., *Closed and Open Vocabulary Approaches to Text Analysis: A Review, Quantitative Comparison, and Recommendations*, Psychological Methods 2020

40. Stevens, R., Brawner, B.M., Kranzler, E.C., **Giorgi, S.**, Lazarus, E., Abera1, M., Huang, S., and Ungar, L.H., *Same drugs, new media: A mixed methods study of youth substance use tweets in the U.S.*, JMIR Public Health and Surveillance, 2020

41. Ashford, R.D., **Giorgi, S.**, Mann, B., Pesce, C., Sherritt, L., Ungar, L.H., Curtis, B., *Digital recovery networks: Characterizing user participation, engagement, and outcomes of a novel recovery social network smartphone application*, Journal of Substance Abuse Treatment, 2019

42. Matero, M., Idnani, A., Son, Y., **Giorgi, S.**, Vu, H., Zamani, M., Limbachiya, P., Guntuku, S., and Schwartz, H. A., *Suicide Risk Assessment with Multi-level Dual-Context Language and BERT*, CLPsych, 2019

43. Lynn, V., **Giorgi, S.**, Balasubramanian, N., and Schwartz, H. A., *Tweet Classification without the Tweet: An Empirical Examination of User versus Document Attributes*, NLP+CSS, 2019

44. **Giorgi, S.**, Preotiuc-Pietro, D., Buffone, A., Rieman, D., Ungar, L., and Schwartz H.A., *The Remarkable Benefit of User-Level Aggregation for Lexical-based Population-Level Predictions*, EMNLP, 2018

45. Zamani, M., Schwartz, H.A., Lynn, V., **Giorgi, S.** and Balasubramanian, N., *Residualized Factor Adaptation for Community Social Media Prediction Tasks*, EMNLP, 2018

46. Clifton, J., Baker, J.D., Park, C.L., Yaden, D.B., Clifton, A., Terni, P., Miller, J.L., Zeng, G., **Giorgi, S.**, Schwartz, H.A., Seligman, M.E.P., *Primal World Beliefs*, Psychological Assessment, 2018

47. Guntuku, S.C., **Giorgi, S.**, and Ungar, L., *Current and Future Psychological Health Prediction using Language and Socio-Demographics of Children for the CLPysch 2018 Shared Task*, NAACL, 2018

48. Curtis, B.*, **Giorgi, S.***, Buffone, A., Ungar, L., Ashford, R., Hemmons, J., Summers, D., Hamilton, C. and Schwartz, H.A., *Can Twitter Be Used To Predict Excessive Drinking at the County Level?*, PLOS ONE, 2018

49. Schwartz, H.A., **Giorgi, S.**, Sap, M., Crutchley, P., Ungar, L., and Eichstaedt, J., *DLATK: Differential Language Analysis ToolKit*, EMNLP, 2017

50. Almodaresi, F., Ungar, L., Kulkarni, V., Zakeri, M., **Giorgi, S.**, and Schwartz, H.A., *On the Distribution of Lexical Features in Social Media*, ACL, 2017

51. Abdul-Mageed, M., Buffone, A., Peng, H., **Giorgi, S.**, Eichstaedt, J., and Ungar, L., *Recognizing Pathogenic Empathy in Social Media*, ICWSM, 2017

52. Carpenter, J., Preotiuc-Pietro, D., Flekova, L., **Giorgi, S.**, Hagan, C., Kern, M.L., Buffone, A., Ungar, L.H, and Seligman, M.E., *Real men don't say "cute": Using automatic language analysis to isolate inaccurate aspects of stereotypes.* Social Psychological and Personality Science, 2016

53. Smith, L., **Giorgi, S.**, Solanki, R., Eichstaedt, J., Schwartz, H.A., Abdul-Mageed, M., Buffone, A., and Ungar, L., *Does well-being translate on Twitter? A comparative evaluation of English and Spanish well-being lexica.* EMNLP., 2016

54. Preotiuc-Pietro, D., Carpenter, J., **Giorgi, S.**, and Ungar, L., *Studying the Dark Triad of Personality using Twitter Behavior.* CIKM., 2016.

55. Flekova, L., Carpenter, J., **Giorgi, S.**, Ungar, L., and Preoiuc-Pietro, D., *Analysing Biases in Human Perception of User Age and Gender from Text.* ACL., 2016.

56. Flekova, L., Preotiuc-Pietro, D., Carpenter, J., **Giorgi, S.**, and Ungar, L., *Analyzing crowdsourced assessment of user traits through Twitter posts*, Proceedings of the Third AAAI Conference on Human Computation and Crowdsourcing. HCOMP, 2015.

57. **Giorgi, S.**, Saleheen, F., Ferrese, F., and Won, C.H., *Adaptive Neural Replication and Resilient Control Despite Malicious Attacks*, 5th International Symposium on Resilient Control Systems (ISRCS), 2012.

* denotes equal contributions.

ABSTRACTS

1. Habib, D., **Giorgi, S.**, Kady, A., Demko, Z., and Curtis, B., *Novel substance use and support themes on reddit: Lessons for researchers and practitioners*, American Public Health Association 2023

2. Rai, S., **Giorgi, S.**, Curtis, B., Guntuku, S.C., and Ungar, L., *Studying Racial Heterogeneity in Language Markers of Depression*, IC2S2 2023

3. Havaldar, S., **Giorgi, S.**, Talhelm, T., Guntuku, S.C., and Ungar, L., *Measuring Regional Variation in Culture Through Embedding-Based Lexica*, IC2S2 2023

4. Rai, S., **Giorgi, S.**, Curtis, B., Guntuku, S.C., and Ungar, L., *Studying Racial Heterogeneity in Language Markers of Depression*, Computational Psychiatry Conference, 2023

5. Isman, K., **Giorgi, S.**, Liu, T., Ellis, J., Huhn, A., and Curtis, B., *Perceptions Matter: Stigma, Mental Health, and Drug Treatment Outcomes*, International Conference on Stigma, 2022

6. Habib, D., **Giorgi, S.**, Bellew, D., and Curtis, B., *Trends in the dehumanization of people who use drugs in American news articles from 1986 to 2020*, American Public Health Association, 2022

7. Turpin, R., **Giorgi, S.**, and Curtis, B., *Segregation, coronavirus racial bias, and relationships with Covid-19 distress*, American Public Health Association, 2022

8. **Giorgi, S.**, Lynn, V., Gupta, K., Ahmed, F., Matz, S., Ungar, L.H., and Schwartz, H.A., *Correcting Sociodemographic Selection Biases for Population Prediction from Social Media*, Regional Cultural Differences Conference, 2022

9. Ungar, L.H., **Giorgi, S.**, Eichstaedt, J.C., Gardner, J., and Schwartz, H.A., *Filling in the White Space: Spatial Interpolation with Gaussian Processes and Social Media Data*, Regional Cultural Differences Conference, 2022

10. Lou, S., **Giorgi, S.**, Eichstaedt, J., and Curtis, B., *Comparing United States Small Area Composite Vulnerability Indices with Mortality, Health, and Well-Being*, 3rd Workshop on the Data for the Wellbeing of Most Vulnerable (DWMV) at the International AAAI Conference on Web and Social Media (ICWSM), 2022.

11. Himelein-Wachowiak, H., **Giorgi, S.**, Kwarteng, A., Schriefer, D., Smitterberg, C., Yadeta, K., Bragard, E., and Curtis, B., *Getting "clean" from nonsuicidal self-injury: Addiction language and experiences on the subreddit r/selfharm*, 2nd Workshop on the Data for the Wellbeing of Most Vulnerable (DWMV) at the International AAAI Conference on Web and Social Media (ICWSM), 2021.

12. Abebe, R.*, **Giorgi, S.***, Tedijanto, A., Buffone, A.E.K., Schwartz, H.A., *Quantifying Community Characteristics of Maternal Mortality Using Social Media*, IC2S2, 2020

TEACHING

Temple University, Philadelphia, Pennsylvania

Senior Design Project II, ENGR 4296	2013
Intro to Engineering, ENGR 1101	2013
Microprocessor Systems Laboratory, ECE 3613	2012

Community Outreach and High School Programs

Ayuda Center STEM Program, Temple University	2013-2014
PACTS Youth Program, Franklin Institute	2013
Women's Engineering Exploration, Temple University	2012
EE01 Intro to Robotics, Temple University	2012

Mentoring	Mentored 10 students; 6 accepted papers	
	Zachary Fried	2022-Present
	Sophia Lou	2021-Present
	Ashley Francisco	2022
	Kelsey Isman	2022
	Daniel Habib	2021-2022
	Farhan Ahmed	2020-2022
	Kenna Yadeta	2021-2022
	McKenzie Himelein-Wachowiak	2020-2021
	Pulkit Dongle	2019
	Claire Pajot	2018

Honors and Awards

Paper and Poster Awards

Paper of the Month: NIDA IRP   Oct. 2022
for Nonsuicidal Self-Injury and Substance Use Disorders: A Shared Language of Addiction
Outstanding Reviewer: EMNLP   2020
First Prize: Poster Contest, Middle Atlantic Section of ASEE   2014
for Adaptive Neural Replication and Resilient Control Despite Malicious Attacks