SINDHU KIRANMAI ERNALA

CONTACT

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RESEARCH INTERESTS

I am broadly interested in Computational Social Science, applying methods from machine learning, statistical modeling, and natural language processing to questions around health and well-being. My research aims to understand the efficacy of social media for mental health interventions.

EDUCATION

Doctor of Philosophy, Computer Science *2016 - present*
Georgia Institute of Technology
Advisor : Munmun De Choudhury

Bachelor of Technology, Computer Science *2011 - 2016*
with Master of Science, Exact Humanities
International Institute of Information Technology Hyderabad, India
Thesis title : Towards Construction of Social Automaton

EXPERIENCE

Graduate Research Assistant *August 2016 - present*
Social Dynamics and Well-being Lab, Georgia Institute of Technology

External Research Collaborator *August 2019 - present*
Pro Unlimited @ Facebook Inc.

Core Data Science Intern *May 2019 - August 2019*
Facebook Inc., Menlo Park

Research Intern *May 2017 - August 2017*
Information Science Institute, USC

Research Intern *May 2015 - August 2015*
Xerox Research Center India

Visiting Student Researcher *May 2014 - July 2014*
Insight Center for Data Analytics, Ireland

Software Developer Intern *May 2013 - July 2013*
Imaginate Software Labs

PUBLICATIONS

Refereed Journal Articles

[1] Birnbaum, M.*, **Ernala, S. K.***, Rizvi, A. F., Arenare, E., Van Meter, A., De Choudhury, M., Kane, J. (2019). Detecting Relapse in Youth with Psychotic Disorders Utilizing Patient-Generated and Patient-Contributed Digital Data from Facebook. In **npj Schizophrenia**. To appear. *(* co-first authors)*

[2] Saha, K., Torous, J., **Ernala, S. K.**, Rizuto, C., Stafford, A., & De Choudhury, M. (2019). A Computational Study of Mental Health Awareness Campaigns on Social Media. In **Translational Behavioral Medicine**.

[3] Birnbaum, M.*, **Ernala, S. K.***, Rizvi, A., De Choudhury, M. & Kane, J. (2017). A Collaborative Approach to Identifying Social Media Markers of Schizophrenia by Employing Machine Learning and Clinical Appraisals. In **Journal of Medical Internet Research (JMIR)**.
(equal contribution)*

Refereed Conference Proceedings

[1] **Ernala, S. K.**, Birnbaum, M., Candan, K., Rizvi, A., Sterling, W., Kane, J., & De Choudhury, M. (2018). Methodological Gaps in Predicting Mental Health States from Social Media : Triangulating Diagnostic Signals. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems. CHI 2019.

[2] **Ernala, S. K.**, Labetoulle, T., Bane, F., Birnbaum, M., Rizvi, A., Kane, J., & De Choudhury, M. (2018). Characterizing Audience Engagement and Assessing its Impact on Social Media Disclosures of Mental Illnesses. In Proceedings of the 12th International AAAI Conference on Web and Social Media. ICWSM 2018.

[3] **Ernala, S. K.**, Rizvi, A., Birnbaum, M., Kane, J., & De Choudhury, M. (2018). Linguistic Markers Indicating Therapeutic Outcomes of Social Media Disclosures of Schizophrenia. In Proceedings of the 21st ACM Conference on Computer-Supported Cooperative Work and Social Computing. CSCW 2018 Online First.

[4] Sharma, E., Saha, K., **Ernala, S. K.**, Ghoshal, S., & De Choudhury, M. (2017). Analyzing Ideological Discourse on Social Media : A Case Study of the Abortion Debate. In Proceedings of the CSSA's Annual Conference on Computational Social Science. CSS 2017.

[5] Banerjee, J., Raravi, G., Gupta, M., **Ernala, S. K.**, Kunde, S., & Dasgupta, K. (2016). CAPReS : Context Aware Persona Based Recommendation for Shoppers. In AAAI Conference on Artificial Intelligence. AAAI 2016.

Refereed Workshop Papers

[1] Sapienza, A.*, **Ernala, S. K.***, Bessi, A., Lerman, K., & Ferrara, E. (2018). DISCOVER : Mining Online Chatter for Emerging Cyber Threats. In Proceedings of the 3rd Workshop on Computational Methods in CyberSafety, Online Harassment and Misinformation at WWW 2018. *(* equal contribution)*

[2] Poddar, S.*, **Ernala, S. K.***, & Singh, N. (2016). PACMAN : Psycho and Computational Framework of an Individual. In Proceedings of the Workshop on Emotion and Sentiment Analysis at the 10th International Conference on Language Resources and Evaluation (LREC). *(* co-first authors)*

[3] Poddar, S.*, **Ernala, S. K.***, Singh, N., & Samvara, A. (2016). Towards a Ubiquitous Model of an Individual in Social Machines. In Proceedings of the 25th International Conference Companion on World Wide Web. WWW 2016. *(* co-first authors)*

[4] Asooja, K., **Ernala, S. K.**, & Buitelaar, P. (2015). UNLP at the MediaEval 2015 C@merata Task. In MediaEval 2015.

[5] Asooja, K., **Ernala, S. K.**, & Buitelaar, P. (2014). UNLP at the MediaEval 2014 C@merata Task. In MediaEval 2014.

Refereed Presentations/Abstracts

[1] **Ernala, S. K.**, Rizvi, A., Birnbaum, M., Kane, J., & De Choudhury, M. (2018). Using Social Media to Identify Risk Markers and Predict Relapse in Schizophrenia. Presented at Social Media and Health Workshop at the International Conference on Web and Social Media. ICWSM 2018

[2] Birnbaum, M., De Choudhury, M., Rizvi, A., **Ernala, S. K.**, Cecchi, G., & Kane, J. (2018). Identifying Psychotic Symptoms and Predicting Relapse through Social Media Data. In International Conference on Early Intervention in Mental Health. IEPA 2018.

[3] Birnbaum, M., De Choudhury, M., Rizvi, A., **Ernala, S. K.**, & Kane, J. (2018). Identifying Psychotic Symptoms and Predicting Relapse through Social Media Data. In Fourth Meeting on Patient Reported Outcomes and Person Centered Care in Mental Health - Symptoms of Mental Disorders : New Research, Treatments, Digital Health, American Association for the Advancement of Science. AAAS.

[4] Birnbaum, M., Rizvi, A., De Choudhury, M., **Ernala, S. K.**, Cecchi, G., & Kane, J. (2018). Identifying Psychotic Symptoms and Predicting Relapse Through Social Media. Schizophrenia Bulletin, 44(Suppl 1), S100.

Patents

[1] Raravi, G., Kunde, S., Eswaran, S., Chander, D., Rangaswamy, N., Banarjee, J., Ernala, S. K., Radhakrishnan, M., & Sharma, P. Systems and methods for enhancing shopping experience in physical stores

[2] Banarjee, J., Raravi, G., Gupta, M., Ernala, S. K., Kunde, S., & Dasgupta, K. Method and system for data processing to recommend list of physical stores in real-time

Talks & Demos

- Mining online chatter for emerging cyber threats, Cybersecurity Lecture series, Georgia Tech.
- THRIVE : Technology and Health Related Information to improve wellness, GVU Fall Research Showcase, Georgia Tech.
- DISCOVER : Generating early warning of cyber threats from online discussions. AI Seminar, Information Sciences Institute, University of Southern California.
- Examining linguistic markers leading to and following social media disclosures of schizophrenia, GVU Fall Research Showcase, Georgia Tech.

Service & Skills

PC Member : WNUT 2019 at EMNLP, The Web Conference (Health on the Web) 2020.

Reviewing : ICWSM, CSCW, CHI, ECIS, JMIR, ToCHI

Mentoring : I.AM.GradComputing Workshop in Atlanta (2019).

Programming : Python, R, C++, Java, C, SQL, Bash, Presto, Javascript

Awards & Honors

- Accepted to the Computing Resesarch Association Grad Cohort for Women program 2019
- Dean's Merit List (top 5% of the class) for Academic Excellence for 2014, 2015 at IIIT-H
- Commendation award for contributions to all round activities and leadership at IIIT-H