

Sashank Santhanam

Department of Computer Science
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Education

University of North Carolina – Charlotte

Ph.D. in Computer Science

Charlotte, NC
expected May 2021

- Research area: Dialogue Systems, Human Behavior Modeling
- Advisors: Dr. Samira Shaikh
- Committee: Dr. Wlodek Zadrozny, Dr. Minwoo Jake Lee, Dr. Nicholas Davis

University of North Carolina – Charlotte

MS in Computer Science

Charlotte, NC
Dec 2015

Anna University

BE in Computer Science and Engineering

Tamil Nadu, India
May 2014

Journal Publications

Shaikh, S., **Santhanam S.**, Srinivasan, V., Mahajan, K., "Towards Understanding the Pragmatics of Emojis through Solidarity Expressed during Crisis Events", Under Review in ACM Transaction of Social Computing, 2019

Santhanam, S., Shaikh, S., "Survey of Natural Language Generation: A Perspective from Traditional Statistical Approaches to Deep Learning Approaches With a Focus on Dialogue Systems", Under Review in Journal of Dialog and Discourse, 2019,

Conference Publications

Santhanam S., Shaikh, S., "Towards Best Experiment Design in Evaluating Dialogue System Output", in 12th International Natural Language Generation Conference 2019, Tokyo, Japan

Srinivasan V., **Santhanam S.**, Shaikh, S., "Natural Language Generation Using Reinforcement Learning with External Rewards", in 18th IEEE International Conference on Machine Learning and Applications - ICMLA 2019, Boca Raton, Florida

Santhanam S., Shaikh, S., "Salient Context Identification from Memory for Neural Dialog Systems", [Under Review, 2019]

Wesslen, R., **Santhanam, S.**, Karduni, A., Cho, I., Shaikh, S., Dou, W., "Investigating Effects of Visual Anchors on Decision-Making about Misinformation", in 21st International IEEE Conference on Visualization (EuroVis), Porto, Portugal, to appear,

Karduni, A., Cho, I. Wesslen, R., **Santhanam, S.**, Volkova, S., Arendt, D., Shaikh, S., Dou, W., "Vulnerable to Misinformation? Verifi!", in 24th ACM Conference on Intelligent User Interfaces, Los Angeles, USA, Mar. 16-20 2019,

Karduni, A., Wesslen, R., **Santhanam, S.**, Cho, I., Volkova, S., Arendt, D., Shaikh, S., Dou, W., "Can You Verifi This? Studying Uncertainty and Decision-Making about Misinformation in Visual Analytics.", in 12th International AAAI Conference on Web and Social Media, Stanford, USA, Jun. 25-28 2018, (**Acceptance Rate: 16%**)

Santhanam S., Srinivasan, V., Glass, S., Shaikh, S., "I Stand With You: Using Emojis to Study Solidarity in Crisis Events", in Proceedings of 1st International Workshop on Emoji Understanding and Applications in Social Media (ICWSM), Stanford, USA, Jun. 25-28 2018, published by AAAI.

Santhanam S., Shaikh, S., "I Stand With You: Detecting and Characterizing Expressions of Solidarity in Social Media", in 4th International Conference on Computational Social Science (IC2S2), Chicago, USA, July. 12-15 2018.

Cho, I., Wesslen, R., Karduni, A., **Santhanam, S.**, Shaikh, S., Dou, W., "The Anchoring Effect in Decision-Making with Visual Analytics", in 12th International IEEE Conference Visual Analytics Science and Technology, Phoenix, Arizona, Oct. 1-6 2017, (**Acceptance Rate:** 22% - 25%)

Poster Presentations

Santhanam S., Shaikh, S., "Salient Context Identification from Memory for Neural Dialog Systems", in 2nd Southern Data Science Conference, Atlanta, USA, Apr. 13-14 2019.

Dalton, A., Zema, A., Masoumzadeh, A., Bhatia, A., Dorr, B., Mather, B., Hebenstreit, B., Al-Shaer, E., Khoja, E., Castillo, E.J., Bunch, L., Vlahovic, M., Liu, P., Pirolli, P., Shah, R., Cartacio, S., Shaikh, S., **Santhanam S.**, Dhaduvai, S., Strzalkowski, T., Karimi, Y., "Modeling Social Engineering Risk using Attitudes, Actions, and Intentions Reflected in Language Use", in 32nd International FLAIRS Conference, Florida, USA, May. 19-22 2019. [Alphabetical Ordering]

Santhanam S., Shaikh, S., "Propaganda or Clickbait? Understanding and Classifying Types of Misinformation using Recurrent Neural Networks", in 1st Southern Data Science Conference, Atlanta, USA, Apr. 13-14 2018.

Press Coverage

Santhanam S., Shaikh, S., "[Understanding the emoji of solidarity](#)", in The Conversation, July 16, 2018

Research Experience

University of North Carolina – Charlotte

Charlotte, NC

Ph.D. Candidate

Conversational Agents

2018 – Present

- Creating conversational agents that adapt cognitive architectures using different kinds of memories.
- Relationship modeling and understanding its importance in dialogue systems to be more personalized
- Building conversational agents that produce emotional messages and engage countermeasures for social engineering and phishing attacks [DARPA Grant]

Human Behavior Modeling

2017 – Present

- Analysis of Twitter and Gab.com to understand how the online community comes together to express messages of solidarity through text and emojis
- Cross-platform analysis on Twitter and Gab.com for abusive language through various crisis events.

Understanding Decision Making

2017 – Present

- Evaluating the impact of anchoring and confirmation bias on decision making through visual analytics tasks on misinformation.
- Evaluating the impact of cognitive biases and experiment design towards conversational dialogue evaluation

Professional Experience

Walmart, Global Shared Service

Charlotte, NC

Data Analyst

2015 – 2016

- Developed software to help the associates at Walmart to process invoices and other receipts.
- Reduced workload of the associates by auto-matching invoices and the receipts.
- Developed workflows in alteryx and dashboards using Tableau to help in tracking of the backlogs.

- Mentor: Dr. Saji K. Matthew
- Implemented a scoring algorithm in R to analyze the emotional variation on Twitter data during sporting events

Awards

Visual Dialog - Best Project Award
Conversational International Summer School

Lowell, MA
2019

Association for Advancement of Artificial Intelligence
Graduate Travel Support

Stanford, CA
2017 – Present

University of North Carolina – Charlotte
Graduate Assistant Support Plan(GASP)

Charlotte, NC
2017 – Present

Professional Activities

1) Reviewing

- Reviewer of the **2nd International Workshop on Emoji Understanding and Applications in Social Media Co-located with The Web Conference 2019.**
- Reviewer of **NAACL 2019.**
- Reviewer of **ACL 2019.**
- Reviewer of **ACM CHI Conference on Human Factors in Computing Systems, 2019.**
- Reviewer of **WiNLP 2019.**
- Reviewer of **AAAI 2020.**

2) Invited Lectures

- **Natural Language Processing** - Neural Networks for Natural Language Generation
- **Natural Language Processing** - Machine Translation
- **Computation Human Behavior Modeling (ITCS 8050/6050, PSYC-6099)** – Survey of Natural Language Generation Techniques
- **Applied Machine Learning** - Introduction to Reinforcement Learning