

YASAS SENARATH

Ph.D. Student / Graduate Research Assistant
George Mason University, Fairfax, Virginia, USA

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INTERESTS

Social Computing, Disaster Informatics, Data Mining, Natural Language Understanding

EDUCATION

College of Engineering and Computing

George Mason University, United States

Aug 2019 – Present

CGPA: 3.97/4.0

- Ph.D. (Information Technology), Advisor: Dr. Hemant Purohit
- Humanitarian Informatics Lab

Department of Computer Science and Engineering

University of Moratuwa, Sri Lanka

Jan 2018 – Jun 2019

Overall GPA: 4.20/4.20

- M.Sc. – Research based M.Sc. in Data Science
- DataSEARCH: Data Science, Engineering and Analytics Research Hub

Department of Computer Science and Engineering

University of Moratuwa, Sri Lanka

Jan 2014 – Jan 2018

Overall GPA: 3.95/4.20

- B.Sc. Eng. (Hons.) – Honours Degree of Bachelor of Science of Engineering
- Enlisted in dean's list in all semesters in the Department of Computer Science and Engineering

EXPERIENCE

Graduate Research Assistant

Humanitarian Informatics Lab (Human-Info-Lab)

Aug 2019 – Present

George Mason University, US

- Analyze human behavior from social media data related to natural hazards and societal crises (stereotyping, hate-based violence) for decision support in government agencies.
- *Research Focus:* (1) Using knowledge bases to improve context understanding of deep learning based classification models. (2) Mining intentional behavior on social media relevant to disaster resilience.

Graduate Research Assistant

Center for Climate Change Communication

Jun 2021 – Aug 2021

George Mason University, US

- Analyzed the effectiveness of educational events related to Climate Change Communication by modeling the divergence in the communication behavior of participants using their social media content posted over time.

Graduate Research Assistant

Data Science, Engineering and Analytics Research Hub (DataSEARCH) University of Moratuwa, LK

Jan 2018 – Jul 2019

- Researched on methods for fine-grained emotion detection in Tweets using transfer learning.
- Attained 8th rank out of 30 participants in Implicit Emotion Shared Task at WASSA-2018 while outperforming the baseline by 8%.

Visiting Instructor*Department of Computer Science and Engineering*

Jan 2018 – Jul 2019

University of Moratuwa, LK

- Visiting Instructor of Subjects: Data Science, Advanced Algorithms, Data Structures

Trainee Software Engineer*Undergraduate Internship*

Jul 2016 – Dec 2016

CodeGen International (PVT) Ltd., LK

- Opinion and Entity Extraction from reviews related to tourist attractions.

PUBLICATIONS**Practitioner-Centric Approach for Early Incident Detection Using Crowdsourced Data for Emergency Services**

Y Senarath, A Mukhopadhyay, S M Vazirizade, H Purohit, S Nannapaneni, and A Dubey

Accepted at the 21st IEEE International Conference on Data Mining (ICDM) 2021**Mining Risk Behaviors from Social Media for Pandemic Crisis Preparedness and Response**

Y Senarath, S Peterson, H Purohit, A L Hughes, K K Stephens

International Conference on Social Computing, Behavioral-Cultural Modeling, Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS) 2021**Evaluating the Relevance of UMLS Knowledge Base for Public Health Informatics during Disasters**

Y Senarath, J L Chan, H Purohit, O Uzuner

18th International Conference on Information Systems for Crisis Response and Management (ISCRAM) 2021**Towards a Design of Resilience Data Repository for Community Resilience**

H L Nguyen, Y Senarath, H Purohit, R Akerkar

18th International Conference on Information Systems for Crisis Response and Management (ISCRAM) 2021**Online-Computer-Mediated Interviews and Observations: Overcoming Challenges and Establishing Best Practices in a Human-AI Teaming Context**

K K Stephens, K Nader, A G Harris, C Montagnolo, A L Hughes, S A Jarvis, Y Senarath, H Purohit

54th The Hawaii International Conference on System Sciences (HICSS) 2021**Efficient Detection of Multilingual Hate Speech by Using Interactive Attention Network with Minimal Human Feedback**

F Vitiugin, Y Senarath, H Purohit

13th ACM Web Science Conference 2021**Emergency Incident Detection from Crowdsourced Waze Data using Bayesian Information Fusion**

Y Senarath, S Nannapaneni, H Purohit, A Dubey

IEEE/WIC/ACM International Joint Conference On Web Intelligence And Intelligent Agent Technology (WI-IAT) 2020**Evaluating Semantic Feature Representations to Efficiently Detect Hate Intent on Social Media**

Y Senarath, H Purohit

IEEE 14th International Conference on Semantic Computing (ICSC) 2020**ACTSEA: annotated corpus for Tamil & Sinhala emotion analysis**

R Jenarthanan, Y Senarath, U Thayasivam

Moratuwa Engineering Research Conference (MERCon) 2019

A Hybrid Approach for Aspect Extraction from Customer Reviews

Y Senarath, N Jihan, S Ranathunga

International Journal on Advances in ICT for Emerging Regions

2019

DataSEARCH at IEST 2018: Multiple Word Embedding based Models for Implicit Emotion Classification of Tweets with Deep Learning

Y Senarath, U Thayasivam

9th Workshop on Computational Approaches to Subjectivity, Sentiment and Social Media Analysis (WASSA)

2018

Aspect Extraction from Customer Reviews Using Convolutional Neural Networks

N Jihan, Y Senarath, S Ranathunga

International Conference of Advances in ICT for Emerging Regions (ICTer)

2018

Multi-Domain Aspect Extraction using Support Vector Machines

N Jihan, Y Senarath, D Tennekoon, M Wickramarathne, S Ranathunga

29th Conference on Computational Linguistics and Speech Processing (ROCLING)

2017

OPEN-SOURCE PROJECTS

SinLing¹

2019

Primary contributor of the only toolbox for Sinhalese language processing.

- Includes Tokenizer, Stemmer, POS-Tagger, Morphological Analyzers.

TextFlow²

2020

Primary contributor of annotation framework for natural language processing. TextFlow is being used in CitizenHelper³.

HONORS AND AWARDS

CINTEC Award

2018

- Awarded for the highest graded final year project at Department of Computer Science and Engineering, University of Moratuwa, Sri Lanka.

Gold Award for Most Outstanding Digital Communication Project

2018

- Awarded by Rotaract District 3220 Sri Lanka & Maldives at the 28th rotaract district assembly held on 08/07/2018 for the community project TrainLK.

SKILLS

Technical Skills

Python, PyTorch, Keras, Scikit-learn, Pandas, Numpy, JavaScript

Soft Skills

Teamwork, Time Management, Communication, Presentation

¹<https://github.com/ysenarath/sinling>

²<https://github.com/ysenarath/textflow>

³<https://citizenhelper.orc.gmu.edu/>