YASAS WIJESURIYA

Ph.D. Candidate, School of Computing

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INTERESTS

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

EDUCATION

College of Engineering and Computing   Aug 2019 – Present
George Mason University, United States

· Ph.D. (Information Technology), Advisor: Dr. Hemant Purohit

College of Engineering and Computing   Aug 2019 – Aug 2022
George Mason University, United States

· *M.Sc.* (Applied Information Technology), Advisor: Dr. Hemant Purohit
· Concentration: Cyber-Human Systems (CBHS)

Department of Computer Science and Engineering   Jan 2018 – Jun 2019
University of Moratuwa, Sri Lanka

· Research based *M.Sc.* in Data Science
· DataSEARCH: Data Science, Engineering and Analytics Research Hub

Department of Computer Science and Engineering   Jan 2014 – Jan 2018
University of Moratuwa, Sri Lanka   *GPA: 3.95/4.20*

· B.Sc. Eng. (Hons.) - Bachelor of Science in Engineering (Honours)

EXPERIENCE

Graduate Teaching Assistant   Aug 2025 – Present
Information Sciences and Technology   *George Mason University, US*

· Assisting in Database Fundamentals (IT-214) and Data Analytics in Social Media (AIT-724) courses.
· Conducting hands-on lab sessions and evaluating assignments with timely feedback to support student learning.

Graduate Research Assistant   Aug 2019 – Aug 2025
Humanitarian Informatics Lab (Human-Info-Lab)   *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 for continual learning. (2) Mining intentional behavior on social media relevant to disaster resilience.

Graduate Research Assistant   Jun 2021 – Aug 2021
Center for Climate Change Communication   *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   Jan 2018 – Jul 2019
Data Science, Engineering and Analytics Research Hub (DataSEARCH)   *University of Moratuwa, LK*

· Researched methods for fine-grained emotion detection in Tweets using transfer learning.

Visiting Instructor   Jan 2018 – Jul 2019
Department of Computer Science and Engineering   *University of Moratuwa, LK*

· Visiting Instructor for subjects in Data Science, Advanced Algorithms, and Data Structures

Trainee Software Engineer   Jul 2016 – Dec 2016
Undergraduate Internship   *CodeGen International (PVT) Ltd., LK*

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

PUBLICATIONS*

Knowledge-guided Continual Learning for Behavioral Analytics Systems
Senarath, Yasas; Purohit, Hemant;
The IEEE International Conference on Cognitive Machine Intelligence (IEEE-CogMI)   *2025*

Lifelong Learning Framework for Multilingual Hate Speech Detection in Social Media Streams
Senarath, Yasas; Purohit, Hemant;
The International Conference on Social Computing, Behavioral-Cultural Modeling, & Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS)   *2024*

Closing the Knowledge Gap in Designing Data Annotation Interfaces for AI-powered Disaster Management Analytic Systems
Ara, Zinat; Salemi, Hossein; Hong, Sungsoo Ray; Senarath, Yasas; Peterson, Steve; Hughes, Amanda Lee; Purohit, Hemant;
The International Conference on Intelligent User Interfaces (IUI)   *2024*

Designing a Human-centered AI Tool for Proactive Incident Detection Using Crowdsourced Data Sources to Support Emergency Response
Senarath, Yasas; Mukhopadhyay, Ayan; Purohit, Hemant; Dubey, Abhishek;
Digital Government: Research and Practice (DGOV)   *2024*

Citizen-helper system for human-centered AI use in disaster management
Senarath, Yasas; Pandey, Rahul; Peterson, Steve; Purohit, Hemant;
The International Handbook of Disaster Research   *2023*

Summarizing Social Media & News Streams for Crisis-related Events by Integrated Content-Graph Analysis: TREC-2023 CrisisFACTS Track
Salemi, Hossein; Senarath, Yasas; Sharika, Tarin Sultana; Gupta, Anuridhi; Purohit, Hemant;
The Text REtrieval Conference Proceedings (TREC)   *2023*

Violence-Inducing Behavior Prevention in Social-Cyber Space
Senarath, Yasas; Purohit, Hemant; Akerkar, Rajendra;
The International Symposium on AI, Data and Digitalization (SAIDD)   *2023*

A Comparative Study of Pre-trained Language Models to Filter Informative Code-mixed Data on Social Media during Disasters
Salemi, Hossein; Senarath, Yasas; Purohit, Hemant;
The International Conference on Information Systems for Crisis Response and Management (ISCRAM)   *2023*

EVO-LYZER: Social Media Mining System for Evolving Communication Behavior Analytics to Aid Climate Change Programs
Senarath, Yasas; Borth, Amanda; Maibach, Edward; Purohit, Hemant;
The ICWSM Workshops: Networks and Opinions on Climate Action in the Public Sphere (NOCAPS)   *2022*

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*Publications appear under the name: Yasas Senarath

PROBER: A System for Real-time Propaganda Behavior Analytics on Social Media and Web Data Streams
Senarath, Yasas; Anastasopoulos, Antonios; Thornton, Tonya; Purohit, Hemant;
The IEEE International Conference on Big Data (Big Data) *2022*

Human-AI Teaming for COVID-19 Response: A Practice & Research Collaboration Case Study
Hughes, A; Stephens, Keri K; Peterson, Steve; Purohit, Hemant; Harris, Anastazja G; Senarath, Yasas; Jarvis, S Ashley; Montagnolo, Carolyn E; Nader, Karim;
The International Conference on Information Systems for Crisis Response and Management (ISCRAM) *2022*

Mining risk behaviors from social media for pandemic crisis preparedness and response
Senarath, Yasas; Peterson, Steve; Purohit, Hemant; Hughes, Amanda L; Stephens, Keri K;
International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS) *2021*

Towards a Design of Resilience Data Repository for Community Resilience
Nguyen, Hoang Long; Senarath, Yasas; Purohit, Hemant; Akerkar, Rajendra;
International Conference on Information Systems for Crisis Response and Management (ISCRAM) *2021*

Evaluating the relevance of UMLS knowledge base for public health informatics during disasters
Senarath, Yasas; Chan, Jennifer; Purohit, Hemant; Uzuner, Ozlem;
The 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
Stephens, Keri; Nader, Karim; Harris, Anastazja; Montagnolo, Caroline; Hughes, Amanda; Stevens, Ashley; Wijesuriya, Yasas Pramuditha Senarath; Purohit, Hemant;
The Proceedings of the 54th Hawaii International Conference on System Sciences (HICSS) *2021*

Practitioner-Centric Approach for Early Incident Detection Using Crowdsourced Data for Emergency Services
Senarath, Yasas; Mukhopadhyay, Ayan; Vazirizade, Sayyed Mohsen; Purohit, Hemant; Nannapaneni, Saideep; Dubey, Abhishek;
The IEEE International Conference on Data Mining (ICDM) *2021*

Efficient detection of multilingual hate speech by using interactive attention network with minimal human feedback
Vitiugin, Fedor; Senarath, Yasas; Purohit, Hemant;
The 13th ACM Web Science Conference 2021 *2021*

Emergency incident detection from crowdsourced waze data using bayesian information fusion
Senarath, Yasas; Nannapaneni, Saideep; Purohit, Hemant; Dubey, Abhishek;
The 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
Senarath, Yasas; Purohit, Hemant;
The IEEE International Conference on Semantic Computing (ICSC) *2020*

ACTSEA: annotated corpus for Tamil & Sinhala emotion analysis
Jenarthanan, Rajenthiran; Senarath, Yasas; Thayasivam, Uthayasanker;
The Moratuwa Engineering Research Conference (MERCon) *2019*

A hybrid approach for aspect extraction from customer reviews
Senarath, Yasas; Jihan, Nadheesh; Ranathunga, Surangika;
The International Journal on Advances in ICT for Emerging Regions *2019*

Affect level opinion mining of Twitter streams
Senarath, Yasas;
University of Moratuwa, Sri Lanka *2019*

DataSEARCH at IEST 2018: multiple word embedding based models for implicit emotion classification of tweets with deep learning
Senarath, Yasas; Thayasivam, Uthayasanker;
The Workshop on Computational Approaches to Subjectivity, Sentiment and Social Media Analysis *2018*

Aspect extraction from customer reviews using convolutional neural networks
Jihan, Nadheesh; Senarath, Yasas; Ranathunga, Surangika;
The International conference on advances in ICT for emerging regions (ICTer) *2018*

Multi-domain aspect extraction using support vector machines
Jihan, Nadheesh; Senarath, Yasas; Tennekoon, Dulanjaya; Wickramarathne, Mithila; Ranathunga, Surangika;
The conference on computational linguistics and speech processing (ROCLING) *2017*

TALKS & PRESENTATIONS

Human-centered AI Use in Disaster Management using Crowdsourced Data 2025

4th Workshop on Social Networks and Artificial Intelligence for Disaster Risk Management

HONORS AND AWARDS

Doctoral Research Scholarship (2024-25) 2024

· Awarded by George Mason University as a competitive scholarship supporting continued progress toward doctoral degree completion.

Unbounded by Dell Technologies Hackathon 2021

· Awarded for the 1st runner-up position for the CoviSave (COVID-19 safety) project in unbounded by Dell technologies hackathon hosted by Dell EMC.

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, Scikit-learn, Pandas, Numpy, Deep Learning, Machine Learning
Soft Skills	Teamwork, Time Management, Communication, Presentation