



## Hemant Purohit, PhD

Assistant Professor, Department of Information Sciences and Technology  
Core Faculty, Center for Advancing Human-Machine Partnership

### Education

PhD, Computer Science and Engineering, Wright State University

### Key Interests

Social Computing | Crisis Informatics | Human-AI Collaboration | Realtime Analytics |  
Applied Machine Learning | Knowledge Graphs | Humanitarian Technology | Public Safety

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### SELECT PUBLICATIONS

- › H. Purohit *et al.*, Ranking and grouping social media requests for emergency services using serviceability model. *Social Network Analysis and Mining*, 10(1), 1-17 (2020).
- › H. Purohit *et al.*, Intent mining for the good, bad, and ugly use of social web: concepts, methods, and challenges. In: *Emerging Research Challenges and Opportunities in Computational Social Network Analysis and Mining*, N. Agarwal, N. Dokoochaki, & S. Tokdemir, Ed. Cham: Springer International Publishing (2019).
- › J.L. Chan *et al.*, Challenges to transforming unconventional social media data into actionable knowledge for public health systems during disasters. *Disaster Medicine and Public Health Preparedness*, 1-8 (2019).

### Research Focus

Digital technologies such as social media, web, and the Internet of Things (IoT) have revolutionized information generation and consumption, generating massive unstructured data that presents an information overload challenge for sensemaking at any organization. Thus, my research interest is to mine relevant behaviors in online data at scale through the human-AI collaboration based intelligent/AI systems, which can augment human capabilities at organizational workplaces for processing realtime information for decision support. For example, creating realtime systems to filter data to discover people seeking help during disasters to aid emergency services. I create human-centered computing methods to extract and analyze individual/group behavioral knowledge (e.g., intentional acts) from text and multimedia data streams using Natural Language Processing, Computer Vision, and Machine Learning techniques. Our lab applies this research in a variety of domains to design AI systems for public services and social good, e.g., managing natural crises (hurricanes, etc.), societal crises (hate, gender violence, etc), and human crises (terrorism, cyberattacks, etc.).

### Current Projects

- NSF CRII Project: Creating algorithms for mining user intentions from natural language content, such as for seeking help on social media during disasters
- NSF III Project: Designing computational summarization approaches to handle noisy, unstructured data streams from multiple online sources in real-time to transform into a structured and machine-readable format and augment decision support systems of emergency and public services, especially during disasters
- NSF DUE Project: Analyzing social media participation as indicator of actors, awareness, attitudes, and activities related to STEM education and diversity