University of Maryland, Baltimore County (UMBC)

Lead Investigator:
Frank Ferraro • Asst. Professor • Computer Science

Team Members:
Karuna Joshi • Asst. Professor • Information Systems
Tim Finin • Professor • Computer Science
Tim Oates • Professor • Computer Science
Anupam Joshi • Professor & Chair • Computer Science
Language & knowledge understanding
- Structured semantic representations
- Information extraction from text

Knowledge Representation and Reasoning

Joint vision & language processing

Learning with low-to-no supervision

Research Areas

eBiquity lab
KnACC
Knowledge, Analytics, Cognitive and Cloud lab
CORAL
Cognition, Robotics, and Learning lab
Qualifications & Capabilities

Expertise with the full range of modern machine learning (statistical & neural) and KRR technologies and their application to language understanding, information extraction, content personalization, and image understanding.

Building scalable IE systems
- general & large-scale domains (e.g., TAC, Wikipedia)
- specialized domains (e.g., cybersecurity)

Extracting, reasoning over & explaining background knowledge to infer information of interest

Design & use of unsupervised semantic language models in IE systems

Integrating IE and IR systems

Developing systems to ground language meaning in visual inputs

Designing, extending, & using ontologies

Creating, using & grounding knowledge graphs of background knowledge, (e.g., Freebase, DBpedia)

Developing and using scalable knowledge representation and reasoning systems
Looking for Collaborators for

information retrieval

multilingual language understanding/translation

human computer interaction
Contact Information

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