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Computer Science Seminar Series
National Capital Region

Methods and Applications of Semantic Storytelling

Speaker: Dr. Ray Dos Santos
Geospatial Research Lab
U.S. Army Corps of Engineers
Friday, April 1, 2016
1:00PM - 2:00PM, NVC 325

Abstract

Social media have ushered in alternative modalities to propagate news and developments rapidly. The fast pace at which situations evolve necessitates new tools for capturing the spatio-temporal progression of entities such as people, events, and objects. Stitching them together into meaningful streams of information defines the concept of *storytelling*, which attempts to understand human actions and behaviors and automate the work for machine processing. Algorithms for *storytelling* encompass a wide range of tasks, from identifying the entities to graph building to selecting the most appropriate relationships. In this talk, we discuss several techniques for general networking tasks. First, we look into filtering the space of study to limit the amount of entities to be investigated. Next, we investigate a ranking strategy that establishes entity strength. We then show a method that builds storylines based on the candidate entities that have passed the previous stages. *Storytelling* can also be viewed as a collection of events that can be used in practical applications. We will also discuss a method that combines events to measure their correlation and for determining if a set of storylines is coherent or not.

Biography

Ray Dos Santos (rdossant@vt.edu) is a reseacher at the Geospatial Research Lab of the U.S. Army in Alexandria, VA. Ray's research focuses on semantic entity reasoning that tries to bridge the gap between machine-made stories and humanly-understandable facts. He has worked on different types of graph analysis, event association, and spatial understanding of features that can enhance fact building and decision making. Ray also investigates approaches that apply common algorithms in a distributed environment more suitable for Big Data. He works in collaboration with various organizations within the Department of Defense, private corporations, and academic institutions.