BUET ACM CHAPTER
presents

Edge Computing for Data Systems

Speaker: **Md Yusuf Sarwar Uddin**

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Dr. Yusuf Sarwar is currently an Assistant Professor at the University of Missouri-Kansas City (UMKC). His research interests lie in broader areas of systems and networking. He likes to design and build networked systems and formally analyze their operation and performance, especially when they operate under resource-constrained settings. His specific research focus is on distributed computing applied in the areas of Internet of Things (IoT), cyber-physical systems (CPS), mobile computing, and Big Data systems. Dr. Sarwar obtained his Ph.D. in Computer Science from the University of Illinois-Urbana Champaign and got his Masters and Bachelors degree both in Computer Science and Engineering from Bangladesh University of Engineering and Technology (BUET). Before joining UMKC, he has been a faculty member at BUET since 2004.

Abstract

In the era of data, extracting values from data is of great importance where a massive amount of data is being collected, analyzed, and disseminated to end-users for wellness, safety, and other social good. This value proposition is in part due to the proliferation of heavily instrumented physical spaces with a rich and diversified set of sensors constituting the Internet of Things (IoT) or Cyber-physical Systems (CPS). One of the objectives of these data systems is to derive actionable information from raw data and deliver them to a large number of end-users, realizing the so-called Observe-Analyze-and-Act (OOA) paradigm. In this realm, the traditional approach of pushing *all* data to the cloud or to centralized data centers is neither viable nor economical (in addition to concerns regarding data privacy). Instead, recent efforts suggested an edge-centric approach that brings computation closer to both data and users thus giving rise to an edge computing paradigm for data-driven systems. Arguably, the edge can manifest itself in two possible directions: (a) as data moves toward the cloud and gets processed en route to the cloud (data-facing edge) and (b) as data moves toward the end-users and gets processed on the way (user-facing edge). In this talk, I will discuss a couple of recent works in these two directions.

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