Data Science for Assessing Disaster Impacts and Recovery

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Abstract: The year 2020 will be remembered by many generations as one of the most disastrous years in the U.S. history. We witnessed impacts of a pandemic, wildfires, and hurricanes. According to the National Oceanic and Atmospheric Administration (NOAA), the U.S. sustained historically the largest number of weather/climate disaster events with losses exceeding $1 billion in 2020. NOAA shows an unequivocally increasing trend of such "billion-dollar disaster events" over the years. In response to this pressing challenge, what can we do? The Disaster Data Science Lab has been developing data-driven methods to efficiently assess disaster impacts and recovery so we can better respond to and recover from a disaster event. This seminar will highlight multiple projects in the lab, including 1) assessment of COVID-19 impacts and recovery using Google Street View-like imagery data and GPS-based foot traffic data and 2) assessment of other disaster impacts and recovery (e.g., wildfires, hurricanes, earthquakes). The lab's research has been supported by the National Science Foundation (CMMI-1824681, 2031119; DMS-1952781; BCS-2121616).

Bio: Youngjun Choe is an Assistant Professor of Industrial & Systems Engineering at the University of Washington, Seattle. He is the director of the Disaster Data Science Lab, which researches how to leverage data to help others before, during, and after disasters. He received his Ph.D. in Industrial & Operations Engineering and M.A. in Statistics from the University of Michigan, Ann Arbor. He holds bachelor's degrees in Physics and Management Science from KAIST in Korea.