

Nowcasting hail and convective initiation using deep learning

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Convective hazards pose significant risk to life and property, causing billions of dollars of damage each year. In this talk, we discuss recent work from the NSF AI Institute for Research on Trustworthy AI in Weather, Climate, and Coastal Oceanography (AI2ES) on nowcasting severe hail and on predicting convective initiation. Both projects are joint work with the National Severe Storms Laboratory and their Warn on Forecast projects. I will present the results of developing a deep learning model to predict severe hail in the 0-60 min timeframe as well as work to predict new convective storms initiating in the 0-30 min time frame.