

Predicting hurricane damage through semantic web resources

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Predicting the damage caused by a hurricane might be possible thanks to an analysis of semantic web resources, according to work published in the International Journal of Computational Science and Engineering.

Quang-Khai Tran and Sa-kwang Song of the Department of Big Data Science at the University of Science and Technology in South Korea, explain that they have created an algorithm trained with reported damage from 48 sites in the U.S. hit by five different hurricanes. The algorithm can then show the damage that would be seen six hours after landfall of other hurricanes based on the statistics. It works well even with sparse and incomplete data sets, the team reports, which could be important in the face of climate change and very variable weather reporting.

"[The system] was able to estimate the damage levels in several scenarios even if two-thirds of the relevant weather information was unavailable," the team writes. Of course, additional information and training can only improve the system.

In the current version of the [algorithm](#), the team explains that their statistical components should ultimately be able to cope with [real-time](#) streaming data with some additional development of a kind outlined in the paper. The system might then be able to predict damage should we once more see hurricanes of the scale and devastation of Katrina in the U.S. in 2005, cyclone Nargis in Myanmar in 2008, and super typhoon Haiyan in the Philippines in 2013.

More information: Quang Khai Tran et al. Learning pattern of hurricane damage levels using semantic web resources, *International Journal of Computational Science and Engineering* (2020). [DOI: 10.1504/IJCSE.2019.104435](#)

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