



Title: Using Machine Learning Algorithms to Save Lives

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Abstract:

Machine learning has become a technology that is used all around us. The topics we search on the internet go through extremely advanced algorithms to improve recommendations and advertisements to adapt to the user. However, this technology can also be used to directly save lives as well. When I participated in the Massachusetts Institute of Technology (MIT) Beaverworks Summer Institute, we used machine learning to protect people in danger of the hurricane.

People heavily affected by the hurricane often need outside help in order to survive. Hurricanes can damage roads that normal navigation software still thinks are accessible.

My group and I created a program that would use a map of the available roads and manage emergency rescue personnel by mapping out each of their routes in order to save the most lives possible. Hurricanes travel quickly, so we created a program that could balance the most lives saved and how quickly it calculated the result.

For the last week of the institute, we were tasked with creating image recognition software that could recognize the types of damages that an overhead image of a hurricane contained. We would then use the classifications to choose which personnel to send to each location. Just like the previous task, we had to create a program that would produce the most accurate results without sacrificing time.