Abstract Submitted
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**Estimating the Abundance of Ambrosia Pollen using Machine Learning** XUN LIU, Univ of Texas - Dallas — Plants of the genus Ambrosia (ragweed) are known to produce a variety of allergies.Early warning of likely pollen levels can be of use to people with asthma and COPD, etc. However, providing accurate early warnings is challenging. The traditional approach to measuring pollen is labor intensive, including counting the number of pollen particles under a microscope. The purpose of this research is to estimate pollen concentration, with a suite of environmental parameters from meteorology and remote sensing, using machine learning. Machine learning method are applied on the history pollen data and environmental data in Tulsa, to build a regression model describing the way that environmental data influencing pollen concentration. This model is then being used to predict pollen data with new environmental data. The prediction is then compared with new real observation. The result shows the ranking of most influencing environmental factors. As well as the effectiveness of such prediction.

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