

Random forest is a classifier that is consisted of many decision trees. When classifying a new object, votes are taken from all the trees in the forest. The forest chooses the classification with the most votes. Random forests have shown to be one of the most accurate learning algorithms, and, as such, could be applied in various fields. When using random forest in smoke detection different input parameters describing the candidate region could be chosen such as: color, texture, shape and motion descriptors. Example of random-forest based method in smoke detection is given bellow:

JoonYoung Kwak, ByoungChul Ko, Jae-Yeal Nam,

"Forest smoke detection using CCD camera and spatial-temporal variation of smoke visual patterns",

8th International Conference Computer Graphics, Imaging and Visualization(CGIV), Aug 16-19, 2011, Singapore

<http://cvpr.kmu.ac.kr/papers/international-papers/Forest%20smoke%20detection%20using%20CCD%20camera%20and%20spatial-temporal%20variation%20of%20smoke%20visual%20patterns.pdf>

