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Analyze VIIRS night data in Indonesia during 2018 - 2022 (Remote presentation)

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Forest fires that occurred in Indonesia started in 1998 and reached its peak in 2015 where in that year almost half of the world was affected by forest fires. One of the technologies used by NOAA is VIIRS (The Visible Infrared Imaging Radiometer Suite) which began operating in 2011. Most forest fires in Indonesia are mostly carried out by humans whose interests are to expand land, especially oil palm lands, which cover an area of tens to hundreds of thousands of hectares once land clearing is carried out. The peak of the forest fires occurred in 2015 where massive forest fires occurred and caused environmental impacts that not only affected the Indonesian people but also Indonesia's neighboring countries and even had their impacts felt in almost all Asian countries. In 2018, VIIRS released a product, namely VIIRS night, where data was released in one area, namely Indonesia. This data is issued daily for areas in Java, Sumatra, Kalimantan, Sulawesi and Indonesia in general. This VIIRS night data shows the possibility of burning at night. With these data, we began to identify certain areas that tend to burn forests at night, especially areas where large-scale forest fires frequently occur. With the existing data released per day per area, ANN (Artificial Neural Network) is used. The processes used start from Data Cleaning and Processing, Neural Net Creation, Train the ANN, Test the ANN. By using the ANN network, clustering per region of Indonesia, especially Sumatra, Kalimantan and Sulawesi where these areas are areas where forest fires are common, will be able to predict the possibility of forest burning, especially at night.

Keyword : VIIRS , Forest Fire , Artificial Neural Network

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