**If I Were to Invent Something: An Air Pollution detecting Machine.**

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In recent years, air pollution has become a more and more alarming topic of discussion as it is one of the major reasons of climate change especially in Nigeria. So, if were to invent something new, it would be the air pollution detecting machine. We can’t go further in discussion without talking about the reason for this machine: Air pollution.

According to W.H.O, Air pollution is the contamination of the air we breathe, indoors or outdoors or by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere.

The most prominent air pollutant is the popular “Black Soot”. Black soot comes from various sources such as fossil fuel combustion, biomass burning, industrial processes, waste disposal etc. The soot has caused at least 22,077 cases of asthma and other health issues. In 2020, Port-Harcourt ranked as one of the cities with the worst air quality in world, with an air index of 207.817, prompting health concerns.

Over five years, from 2016 to 2021 an estimate of 23,000 individuals in Rivers State suffered from respiratory-related illness due to soot. Some chemicals found in black soot are Volatile Organic Compounds (VOCs), Nitrogen dioxide, carbon dioxide, ozone, sulfur dioxide if these chemicals are being released into the atmosphere can cause ozone depletion thereby exposing us to harmful rays which can cause diseases like cancer and causes death.

With my air pollution detecting machine it detects when the air is polluted and check the degree of pollution and the pollutant that is dominant in the air. It will also help the industries to know if the chemical is used in excess or added in excess. The machine has **particulate matter sensors:** the power house of the machine which does the function of detecting the sub-particles mixed in the air pollutants and also measure the concentration of particles. It will also have gas sensors that will detect gases like Nitrogen dioxide (NO2), Carbon monoxide (CO), Ozone (O3), Sulfur dioxide (SO2). My invention is mostly for the industries that emit gases as a result of their pollution but could also be designed to be used in homes reducing health risks. The machine is rechargeable and is charged by solar energy.

With the help of this machine, the rate of air pollution will be reduced because this machine will be able to detect the degree of pollution and the pollutant and with this information given to the appropriate authority will help them become aware of the dominant pollutant in the air, the degree of the pollutant and make them act fast on these.

In conclusion, Air pollution is a major factor that contributes to climate change and we need to save Mother Earth for a better and greener future for generations to come.