

**COMPARATIVE GEOSTATISTICAL AMBIENT
AIR QUALITY ANALYSIS OF DELHI**

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT FOR THE
AWARD OF DEGREE OF

**MASTER OF TECHNOLOGY
IN
ENVIRONMENTAL ENGINEERING**

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**DELHI TECHNOLOGICAL UNIVERSITY
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ENGINEERING**

CERTIFICATE

This is to certify that the project report entitled “**COMPARATIVE GEOSTATISTICAL AMBIENT AIR QUALITY ANALYSIS OF DELHI**” is a report of the major project done in the partial fulfilment of the requirement for the award of the degree of Master of Technology in Environmental Engineering from Delhi Technological University during the year 2019.

Date:

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CANDIDATE'S DECLARATION

I Saurabh Singh, 2K17/ENE/14 student of M.Tech, Environmental Engineering, hereby declare that the project dissertation entitled **“COMPARATIVE GEOSTATISTICAL AMBIENT AIR QUALITY ANALYSIS OF DELHI ”** which is submitted by me to the Department of Environmental Engineering, Delhi Technological University, Delhi in partial fulfilment of the requirement for the award of degree of Master of technology, is original not copied from any source without proper acknowledgement. The work has not been submitted in part or full for the award of degree for diploma in this or any other institute.

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ABSTRACT

India being the 2nd most populated country of the world and Delhi called the most polluted capital city of the world as per the study by Greenpeace and Swiss-based IQ Air Visual in 2018. Delhi City accommodates 170 lakhs of population. Air pollution has become such a big issue that people here are more prone to respiratory problems. Main pollutants which contribute to air pollution are PM10, PM2.5, NO2, O2, CO, SO2, NH3, Pb etc. where, PM2.5 is most dangerous of all as it reaches much deeper in our respiratory tract. Annual data of five pollutants that is PM10, PM2.5, NO2, SO2, CO of different stations is taken and then obtained average annual data, which is further committed to obtain sub-indices corresponding to air quality index w.r.t that pollutant.

Arc GIS was used to obtain interpolation results. Using Inverse Distance Weighing, raster analysis from areas are obtained where Air quality index has increased and decreased and prediction of air quality of areas was done where monitoring is not done. Area under the influence of PM 2.5 in 2018 has reduced as compared to 2016. With respect to SO2 ambient air quality has is in good category in year 2016, 2017 and 2018. But overall air quality of Delhi in 2016, 2017, 2018 remained in poor, very poor category.

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