# Abstract

# Introduction

para 1

intro to ozone and it's imps

Earth’s atmosphere is the most suitable in all of our solar systems and it composed of several layer. With the recent advancement in technology, people have been seen moving towards urbanization which has increased pollution. There are various pollution indicators such as Nitrogen Dioxide, PPM 2.5, Sodium dioxide, and ozone. Ozone is an essential part of air pollution that is ever present in urban. [1] Ozone is a greenhouse gases and air pollutants in urban areas, and has significantly negative impacts both on the climate change and human health. In recent years, great efforts have been made to reduce surface ozone levels by implementing significant harsh emission control measures of ozone precursors. Ozone is also related to carbon emission across the world. With respect to emission control, Ozone play a significant implication for making control strategies for ozone precursors such as methane, carbon monoxide, and volatile organic compounds. [2] Ozone has been identified as a major oxidant and it is an part of photochemical smog which has been recognized as one of the key pollutants degrading the air quality.

para 2

intro to ozone depletion and impact

Ozone plays a unique role in absorbing certain wavelengths of incoming solar ultra-violate light. One reason ozone is serious environmental problem is because it is not directly emitted into the air which makes it hard to predict and control. [3] The Ozone layer protects all life from sun’s harmful radiation, but human activities have damaged this shield. This depletion in ozone concentration leads to less ozone layer protection from UV light. This constant decrease cause higher risk to skin cancer and cataract rates. Combustion of fossil fuel resulted in more concentration of trace gases like Nitrogen oxides and carbon monoxide. The decrease in the atmospheric air quality is a consequence of accumulation, dispersion and transformation of these air pollutants. [4] The Climatic condition and air pollution are drastically getting increased due to which the environment conditions are disturbed. When temperature increase, the climate change leads an increase in weakening of ozone layer.

para 3

ozone concentration and it's prediction and it's imp

Recent patterns and distribution of field studies has shown that there is an increase in mortality rate during the summer smog due to high ground level ozone concentration. There is a huge efforts has been done to decrease tropospheric ozone concentration through the act of rigorous emission measures to control Ozone precursors. In line with ozone concentration forecasting monitoring station has been constructed to anticipate greater spatial distribution change that helps to ozone reduction. Adding to this, implementing precise regional predictions for ozone concentration is highly important for reducing greenhouse production and public health safety.

para4

current technology in ozone pred and limits

para5

intro to advance tech for ozone concentration and it's importants

intro to machine learning and DL

para6

ML in ozone concentration

para 7

object and authors contribution

motivation

# Reference

1. Tree-based ensemble deep learning model for spatiotemporal surface ozone (O3) prediction and interpretation Zhou Zang
2. Regional prediction of ground-level ozone using a hybrid sequence-tosequence deep learning approach
3. Combining principal component regression and artificial neural networks for more accurate predictions of ground-level ozone
4. Seasonal ground level ozone prediction using multiple linear regression (MLR) mode
5. Hybrid deep learning model for ozone concentration prediction: comprehensive evaluation and comparison with various machine and deep learning algorithms