**Artificial Intelligence Enabled Indoor Air Quality Prediction**

**Description:** Air Quality has a direct impact on health of every human and non-human living beings. Several datasets and methods are easily available for outdoor air quality monitoring. However, Indoor air quality has not been heavily explored by research community. Moreover, Indoor air quality has more impact human life especially those who have the long office work routine. Therefore, prediction of indoor air quality becomes very important. In this context, the role of Artificial Intelligence (AI) can be very crucial. There are several state-of-the-art time-series forecasting methods which can be helpful in predicting the air quality in indoor scenarios. Thus, a study needs to be conducted which can evaluate the performance of different AI models for indoor air quality dataset.

**Objectives**: A Master project within this topic would explore the following objectives.

1. Firstly, a suitable indoor air quality dataset needs to be obtained which can provide information about several air pollutants like ozone (O3), nitrogen dioxide (NO2), carbon monoxide (CO), sulfur dioxide (SO2), and particulate matters (PM 2.5, PM 10 etc.).

2. Second, Exploratory Data Analysis (EDA) will be conducted on the dataset. EDA clears anomalies int the dataset and provides insights to the dataset.

3. Next, some AI models will be applied to predict air pollutants in indoor air quality dataset.

4. The time-series forecasting algorithms will be explored for predicting future occurrence of air pollutants and a conclusion on several time-series forecasting methods will be made.

5. The results and conclusion will be disseminated in reputed research articles or a solid master thesis.

**Tools required:** Basic statistical knowledge, a programming language (preferably Python).

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