



DINABANDHU ANDREWS COLLEGE

NAAC Accredited
(Government Sponsored)
Estd. 1956

Ref. No.

Date

NAME OF THE COLLEGE/ INSTITUTION – IIT Delhi

DATE OF MOU – 2022

PURPOSE OF MOU –

1. To exchange information on research and educational programmes
2. To exchange information on teaching, learning material and other literature relevant to their educational and research programmes,
3. To jointly organize short-term continuing education programmes on topics of mutual interest and to invite each other's faculty to participate therein
4. To jointly organize seminars, conferences or workshops on topics of mutual interest and to invite each other's faculty to participate therein

ACTIVITIES – Air pollution sensor , Deployment



Department of Computer Science & Engineering

INDIAN INSTITUTE OF TECHNOLOGY DELHI

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Rijurekha Sen
Assistant Professor

Date: 15.03.2023

Subject: Air Pollution Sensor Deployment Request

To,
The Principal,
Dinabandhu Andrews College,
Kolkata

Dear Madam/Sir,

A group of researchers from Indian Institute of Technology, Delhi (IIT-D), is conducting a one year pollution monitoring study in Kolkata, in collaboration with St. Xaviers College. We are supported by the West Bengal Pollution Control Board. The project is funded by Environmental Defence Fund (EDF), using which low cost PM 2.5 and PM 10 units have been built in IIT Delhi. One such sensing unit, equipped with 4G SIM card for data transmission to the cloud, needs to be deployed in the premises of your esteemed institution.

Our energetic field staff Sagnik Mallik, Souvik Paul, Urmimala Paul and Swatilekha Ghosh will visit your premises to install a sensor. The height of the sensor from the ground should be 20-30 feet. It should also get good circulation of air, through a window or a grill or a veranda, so that the measured PM 2.5 and PM 10 values reflect the ambient air pollution. Each unit needs a power supply, and will draw current in the order of a mobile phone charging. Additional installation hardware, like extension chord or ropes/rods will be supplied by the field staff.

We will run a pilot study Mar-Apr 2023, to check issues with power, 4G connectivity etc. The main deployment will be Sep 2023 – Feb 2024, covering Durgapuja, Diwali, and winter season. Between Apr-Sep, the unit will be taken away from your premise and kept safely in St. Xaviers college by the field staff. All analysis reports from the collected pollution data will be shared, once the study is completed.

Around 30 institutions have agreed to be part of this deployment. The names of these institutions will be part of all reports and social media posts. We are incredibly grateful for allowing us to install a sensor in your premise, and giving us the necessary support for power supply.

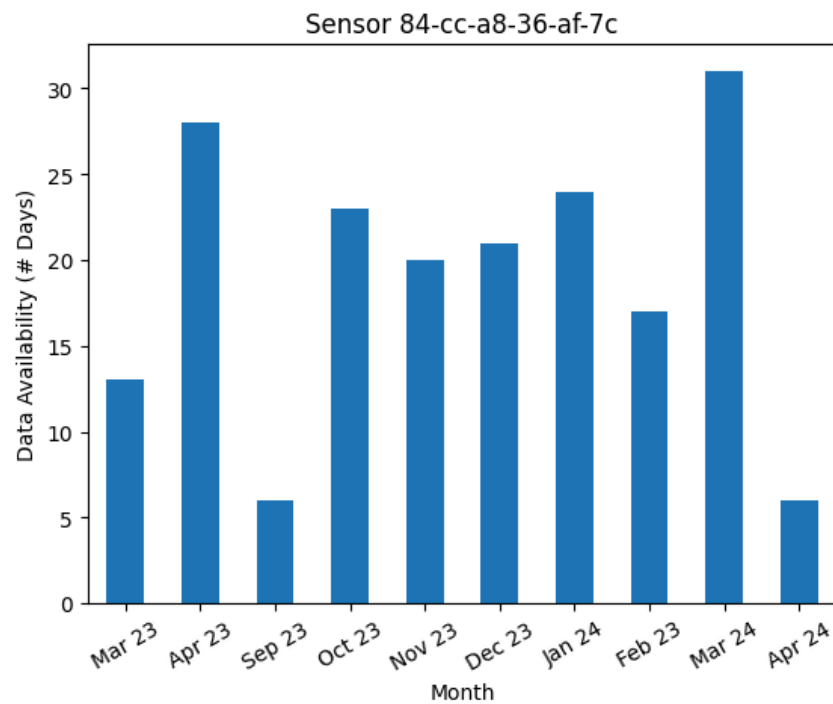
Thanking you,
Yours sincerely,

Rijurekha Sen

Sensor Analysis @ Dinabandhu Andrews College



A graph showing data availability in this static location since installation is shown below -



Sensor Analysis @ Dinabandhu Andrews College

A table giving readings obtained from this location is shown below

	Season	Duration	Min	Max	Mean	Std	# Data
0	Yearly	Mar 23 - Apr 24	1.06	1432.92	106.05	77.38	1385121
1	Summer	Mar 23 - Apr 23	7.58	1432.92	55.30	28.31	301444
2	Post-Monsoon	Sep 23 - Oct 23	1.06	886.61	72.34	47.99	211237
3	Winter	Nov 23 - Dec 23	5.34	1336.70	150.05	82.50	297324
4	Summer	Mar 24 - Apr 24	7.22	771.94	66.98	36.36	274922

Plots showing diurnal PM pattern at this location in summer (mar-apr), post-monsoon (sep-oct) and winter (nov-dec) are given below

Sensor Analysis @ Dinabandhu Andrews College

