REPORT OF EVERYDAY IS SEMINAR DAY

- **TITLE OF EVENT/ PROGRAMME:** EVERYDAY IS SEMINAR DAY - Seminar Lecture Series by the faculty members

- **THEME OF THE EVENT/ PROGRAMME:** Violation of Assumption in CLRM: Problem of Heteroscedasticity

- **ACADEMIC SESSION:** 2022 - 23

- **DATE:** 21st November, 2022, Monday at 1:30 pm

- **VENUE:** Seminar Hall, Asutosh College Centenary Building

- **OBJECTIVE/ PURPOSE:** The Classical Linear Regression Model (CLRM) along with its different assumptions is an important part of our Statistics Honours curriculum. But in practise it is not always possible to get such a dataset or a situation where all of these assumptions hold. So the violation of one of the important assumptions of homoscedasticity had been discussed in this session in order to give an idea to the students about the practical approach of handling real-life datasets using the theoretical concepts they are learning in their regular course.

- **SPEAKER/S / RESOURCE PERSON/S: Speaker:** Ms. Oindrila Bose, SACT, Department of Statistics, Asutosh College.

- **ORGANIZING COMMITTEE:** Asutosh College Academic Sub-Committee in collaboration with IQAC, Asutosh College.

- **TARGET AUDIENCE/ PARTICIPANTS:** Students of Semesters III and V from Statistics Honours Course.

- **NUMBER OF PARTICIPANTS: 73**

- **ATTENDANCE SHEET:**

"EVERYDAY IS SEMINAR DAY"

SEMINAR LECTURE SERIES BY THE FACULTY MEMBERS

Organized by Asutosh College Academic Sub-Committee in collaboration with IQAC, Asutosh College

Date: November 21, 2022 Time: 1:30 PM

Venue: Seminar Hall, Asutosh College Centenary Building

Department: Statistics

Speaker: Prof. Oindrila Bose, SACT, Department of Statistics

Topic: Violation of Assumption in CLRM: Problem of Heteroscedasticity

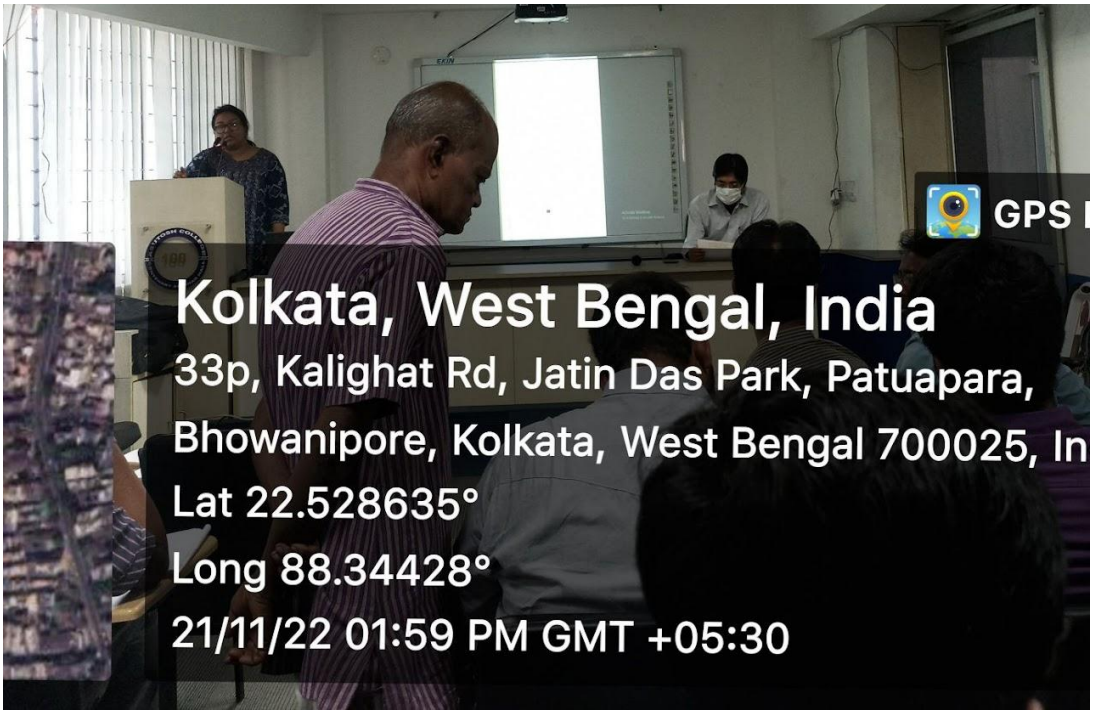
Sl. No.	Name	Roll No.	Sl. No.	Name	Roll No.
1.	Subhanjan Debnath Sem3	0875	29.	Aditya Khan	1573
2.	Atreyee Koyal	0169	30.	Soham Das Sharma	0604
3.	Arikrika Hazra	0818	31.	Rishabh Kumar	0803
4.	Sarkha Saha	0764	32.	Roydip Naskar	0264
5.	Jaimoy Nath	0884	33	Puja Barman	1315
6.	Joyeeta Goswami	1591	34.	Shoey Ghosh	0974
7.	Sudipa Dutta	0683	35	Md Yusuf Imamuddin	1481
8.	Tuyasha Majumder	0450	36.	Aveek Samanta	1101
9.	Shreyasi Kar	0099	37.	Swastik Roy.	0923
10.	Shuvrajyoti Nath Mahajan	0006	38.	Parantap Chattopadhyay	1125
11.	Soumik Das	1321	39	Pradip Basak	1561
12.	Sanghamitra Jana	0364	40.	Niromalya Mondal	0968
13.	Shreya Maiti	1583	41.	Rupankar Roy	1253
14.	Saikat Maity	0926	42.	Soham Sarkar	0365
15.	Sambit Roy	0734	43.	Bablab Chowdhury	0248
16.	Upasana Majumder	1505	44.	Sowvidya Dey	332
17.	Sara Ahamed	1337	45.	Shubhankar Ghosh	862
18.	Dia Sengupta	1231	46.	Kathakali Sardar	142
19.	Sukanya Maity	0280	47.	Soumi Das	1086
20.	Sreyashi Das	0972	48.	Partha Mete	106
21.	Soham Ghosh	1501	49.	Rohan Karmakar	333
22.	Aashreeman Das	1081	50	Nagendra Dey	1267
23.	Rupsha Das	1589	51.	Trisampati Mondal	752
24.	Sudipta Samanta	0708	52.	Arijita Paul	1138
25.	Madhuban Dey	0275	53.	Soumik Dash	858
26.	Ankita Sarkar	0571	54.	Shreya Dutta	1081
27.	Rishiraj Sarkar.	0778	55.	Sampriti Dey	1177
28.	Supratim Maity	1123	56.	Souhardya Das	488

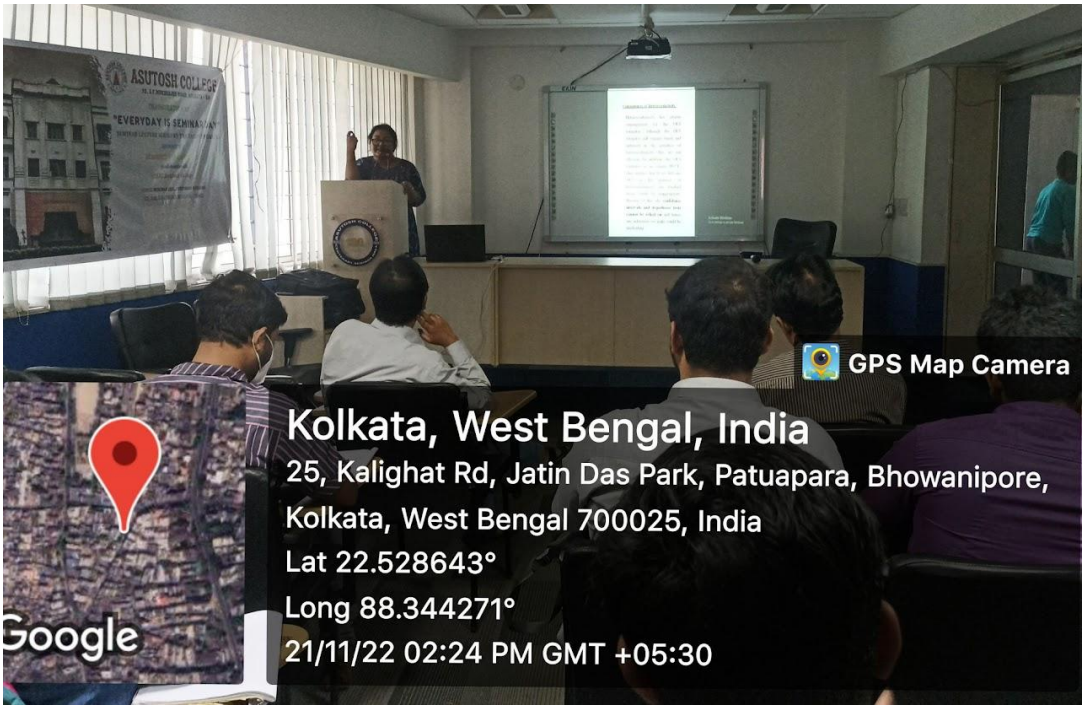
Sl. No.	Name	Roll No.	Sl. No.	Name	Roll No.
57.	Asmita Mallick	179			
58.	Madhumanta Kar.	761			
59	Sannidhya Das	1128			
60	Shuvam Maity	1115			
61	Dipayan Chatterjee	410			
62	Ritam Saha	41			
63	Soujan Ghosh	747			
64	Bishal Paul	89			
65	Souraj Chakraborty	922			
66	Avisikta Das	465			
67	Srijani Majumder	108			
68	Anonya Paul	1158			
69	Promit Mallick	295			
70	Debjyoti Chakraborty	369			
71	Sayan Mandal	0930			
72	Shivam Majumder	1297			
73	Subhajit Talukdar	0076			

- **BRIEF REPORT ABOUT THE EVENT/ PROGRAMME:** The talk started with the introduction of the Classical Linear Regression Model (CLRM) along with its different assumptions. At first heteroscedasticity was defined formally. Thereafter the reasons behind heteroscedasticity and its consequences were discussed briefly. Then two of the most important methods of detection of heteroscedasticity were discussed namely Graphical Method and Glejser's Test. Then the speaker talked about the remedial measures of this problem. A real life dataset and its analysis done in R were used to illustrate the theoretical concepts. Finally the conclusion was drawn in such a way that there are several diagnostic tests available for this problem, but one cannot tell for sure which will work in a given situation. Even if heteroscedasticity is suspected and detected, it is not easy to correct the problem. On the basis of OLS residuals, one can make educated guesses of the likely pattern of heteroscedasticity and transform the original data in such a way that in the transformed data there is no heteroscedasticity. So while working with a real life data we have to be very cautious about these heteroscedastic disturbances and further analysis of them should be done very carefully.

- **EXPECTED OUTCOME:** This lecture session was beneficial for both the students and the faculty members. Students could learn something about an important topic which is not included in their regular course but can be thought of as an extension of it and the faculty members could brush up their skills of giving presentations. Hopefully both the parties will be interested to go deeper into the topic in future.

- **GEO-TAGGED PHOTOGRAPHS:**

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