



**Department of Statistics,
Assam University, Silchar-788011**

Report of the Three Day Workshop on Bayesian Data Analysis

September 16-18, 2019

Considering the fact that the Bayesian framework has greater flexibility in building statistical models and to quantify issues appearing in different disciplines of research the department felt that an Advanced Level Workshop shall be planned for the PG Students and Research Scholars of the Department and beyond. Also it is necessary that the faculty members of the department too gets an exposure to the different machine learning procedures that are applied to achieve the complex computational advances that Bayesian Data Analysis demands.

The workshop was planned to take the advantage of the presence of Prof. Nabendu Pal of University of Louisiana, USA who is an expert in Bayesian Data Analysis in India during that period. He was the sole resource person of the workshop and in the three days he engaged all the sessions.

In each day of the workshop Prof. Pal engaged three sessions of one and half hour each. The first day he introduced the Bayesian Paradigm and the next two days were dedicated to Bayesian calculations. Participants of the workshop were exposed to hands on training in Bayesian computation mainly in R package.

The program was sponsored by the participants with the financial resource being the Registration fees charged from the participants. This included workshop kit, light refreshments, humble working lunch during the workshop days and a certificate of program completion.

Prof. Dibyojyoti Bhattacharjee, Head of the Department was the Coordinator of the workshop.

There were a total of 26 participants in the workshop the details of which can be seen in the table below. One of the participants was from Bangladesh who was supposed to leave for Germany for Higher Education in Statistics.

Sl_No	Name	Subject	Designation	Institute
1	Rimpi Kurmi	Commerce	Research Scholar	Assam University
2	Tapas Kumar Sahoo	Commerce	Research Scholar	Assam University

Sl_No	Name	Subject	Designation	Institute
3	Pinky Mahajan	Commerce	Research Scholar	Assam University
4	Anadya Prakash Tripathi	Statistics	Sr.Manager	Abbott Health Care Private Limited
5	Umme Habibah Rahman	Statistics	Research Scholar	Assam University
6	Mrinal Deka	Statistics	Research Scholar	Assam University
7	Priyanka Talukdar	Statistics	Research Scholar	Assam University
8	Pinto Bhusan Datta	Statistics	Bank Employee	Ex-Student, SUST, Bangladesh
9	Manish Kumar Pandey	Statistics	Research Scholar	Assam University
10	Bireswar Bhattacharjee	Statistics	Research Scholar	Assam University
11	Nabarun Chakraborty	Statistics	P.G. Student	Assam University
12	Nehal Paul	Statistics	P.G. Student	Assam University
13	Anirban Dutta	Statistics	P.G. Student	Assam University
14	asadur Rahman Laskar	Statistics	P.G. Student	Assam University
15	Dipali Deb	Statistics	P.G. Student	Assam University
16	Satabdi Dutta	Statistics	P.G. Student	Assam University
17	Shanu Roy	Statistics	P.G. Student	Assam University
18	Ankita chakraborty	Statistics	P.G. Student	Assam University
19	Rajosree Das	Statistics	P.G. Student	Assam University
20	Purbita Saha	Statistics	P.G. Student	Assam University
21	Kevineino Keretsu	Statistics	P.G. Student	Assam University
22	Mousumi Ray	Statistics	P.G. Student	Assam University
23	Sunayana Paul	Statistics	P.G. Student	Assam University
24	Gitashree Mishra	Statistics	P.G. Student	Assam University
25	Abdul Mukit Laskar	Statistics	P.G. Student	Assam University
26	Bishal Dey	Statistics	P.G. Student	Assam University

The topics that were covered in the workshop comprised of:

- ☐ Conditional probability and Bayes' Original Formula
- ☐ From Bayes' Original Formula to Classical Bayesian Approach in Statistics
- ☐ Posterior Distribution and various forms of Bayes' Rules (with or without a Loss Function)
- ☐ Role of the Prior Distribution
- ☐ Informative Prior and Non-informative Prior, Non-informative priors for location and Scale Parameters
- ☐ Jeffrey's Prior Distribution (both Uni-Parameter and Multi-Parameter cases)
- ☐ The Concept of Empirical Bayes Set-up
- ☐ Method of Bayesian Prediction
- ☐ Overview of Robustness in Bayesian Inference

Some Snapshots of the Workshop



Prof. Nabendu Paul planting a sapling during the Workshop



Group Photo at the end of the workshop
