Editorial Note

We are delighted to present the latest edition of the IIUC Studies, Volume - 20, Issue - 01 (June, 2023), a testament to the enduring commitment of our university to the pursuit of knowledge, innovation, and scholarly excellence. In this volume, we showcase a diverse collection of research articles, reflecting the dedication and intellect of our academic community.

Diversity and inclusivity are integral to our university's identity. This volume features research from scholars representing a wide range of background and perspective. Our institution is enriched by the diversity of thought and experience that our researchers bring to their work.

The peer-review process, conducted by our distinguished panel of experts, ensures that each article published in this journal meets the highest standards of academic excellence. We extend our sincere gratitude to our reviewers for their invaluable contributions in maintaining the journal's integrity.

This issue contains eight studies. There is a brief outline about the findings of those articles below:

Md. Mohib Ullah studies the use of MOOCs for professional development in Bangladesh. The results showed that MOOCs helped teachers raise learners' intercultural awareness, develop content knowledge, facilitate C.T. skill, and interact more in the EFL classroom. The researcher is optimistic that findings will help policymakers and teacher educators to use MOOCs more effectively for teachers' continuous professional development.

Kazi Ashfak Ahmed Chowdhury initiated an interesting issue in *"In vitro* drug-drug interaction study between Ranitidine Hydrochloride and Bisoprolol fumarate". From the data analysis, it can be confirmed that the chemical interaction of Bisoprolol fumarate and Ranitidine Hydrochlorideresults a net decrease in the level of free drug concentration, which ultimately results in a decrease in pharmacodynamics towards site of action, and it is evident that one or both drugs will have lower pharmacological activity as sub therapeutic effect.

Md. Khaliluzzaman introduced a geometrical feature-based framework for pedestrian crossing recognition which is vital for the visually impaired as well as the autonomous navigation system. To detect the pedestrian crossing region from the pedestrian crossing image some unique and natural geometrical features are used in this work. The framework reveals the acceptable accuracy and runtime of 98.01% and 0.70 (s) respectively. Where, the recognition rate is revealed 97.29%.

Md. Hazrat Ali carried out "A study of *in-vivo* antidepressant, antidiarrheal and *ex-vivo* thrombolytic activities of methanol extract of *Mikania micrantha* leaves". The observed results of this scientific investigation revealed the possibility of the suitable use of this plant and whether this plant is useful as a source of alternative

medicine and new therapeutics. Despite the fact the author emphasis that additional investigations will be necessary to understand the mechanism of action and to find therapeutically potential components.

The purpose of the study of A. S. M. Ali Reza is to find out new therapeutic use of Achyranthes ferruginea. Therefore, he studied the plant for in viroanit-inflammatory action as well as in vivo analgesic activities of the methanol extract.In this study, it is explored that the methanolic extract of this plant showed anit-inflammatory and significant dose-dependent antinociceptive activities. The secondary metabolites present in the CME might be responsible for anit-inflammatory and analgesic activities.

Md. Ismail Haque's study demonstrated that both antennas have good accuracy and have no effect on data speeds below 20 Mbps but the loop antenna has a better overall performance in this investigation. This study shows a robust channel model for future wireless medical devices which exploits the advantages of HBC band.

MD Jiabul Hoque's study proposes a novel efficient and effective mechanism for propagating huge files while maintaining load balancing in DHTs with minimal system overhead. An evaluation of the proposed protocol was conducted using the PeerSim simulator.

Last but not the least in this issue Md. Ziaur Rahman initiated "A comparative study on machine learning algorithms for improved prediction measures for COVID-19". The researcher collected data on symptoms of Covid-19 and then the data has been preprocessed. After the Covid-19 symptoms data was developed for machine learning, GS and RS were employed to optimize the parameters of SVM, RF, DT and KNN and used ExtratreesClassifier and correlation matrix for feature selection. Observing the overall results, RS improves all other models when the GS. Furthermore, it was also considered that when the features selected by the RS has given the better result than the GS. Therefore, DT-RS can be a good feature selector and optimizer in prediction the Covid-19 status.

In closing, we extend our gratitude to the authors, reviewers, editorial board members, and the entire university community for their unwavering dedication to advancing knowledge and shaping the future. Together, we embark on a journey of discovery, innovation, and enlightenment.