

## **Some Aspects of AI Tools for Business Statistics Course in Tertiary Education Systems**

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### **Abstract**

Universities require students in an undergraduate business program to complete one or more business statistics courses. Business statistics is built on mathematical principles. It is a branch of applied mathematics that focuses on the analysis of numerical data. This data-driven course is designed to introduce statistical analytics. This includes descriptive analytics, predictive analytics, and inferential analytics. These tools are widely used in various settings for real-time business decisions. Business statistics course provides an opportunity to study and practice these analytical tools as an aid to real-time business decisions in different business settings. However, due to the mathematical nature of this subject, many business students struggle with this subject, leading to high failure and dropout rates. Students often struggle with statistical anxiety, abstract concepts, mathematical complexity, statistical thinking, and communicating statistical outputs. However, Artificial Intelligence (AI) presents new opportunities to address these challenges by providing adaptive, interactive, and automated support systems for learning process. AI embedded tools can be used to enhance conceptual understanding and to automate tasks in big & complex data mining and analysis. AI tools can significantly reduce statistical anxiety and mathematical complexity by offering personalized, interactive, and supportive learning process. This paper is an academic demonstration of integrating AI tools into a business statistics course of an undergraduate business program in a university setting. This exploratory research examines the AI's role in shaping the learning process with automated data-driven engagement of business statistics students. The paper investigates where and how AI tools can be used in the learning process and influence the learning outcomes from the students' perspective. The study addresses both opportunities and challenges of the integration of AI tools into the learning process of the course. Outcomes from this paper provide insights into how AI can be effectively integrated into curriculum design, teaching, and learning to better understand the materials of the business statistics course from students' perspectives in the tertiary education system.

## **Keywords**

Artificial Intelligence, AI in education, statistical analytics, business statistics, tertiary education.

## **Biographies**

**Dr. MM Obaidul Islam** has been in the teaching profession for the last 13 years. He is a Senior Associate Professor of the Department of Operations and Supply Chain Management under the Faculty of Business Administration, American International University-Bangladesh (AIUB). He did his PhD from Jahangirnagar University, an MBA, and a Master of Electronic Commerce from Australia. He also did his Master of Statistics from Dhaka University. Mr. Islam obtained a Postgraduate Diploma of Science in Mathematics and Planning from Australia and a Postgraduate Diploma in Development Planning from the Academy of Planning under the Ministry of Planning, Government of Bangladesh. His research interests include business statistics, SME, and E-Commerce in developing countries.

**Dr. Bikash Barua** is serving as Associate Professor at Faculty of Business Administration in American International University-Bangladesh. Prior to joining AIUB, he served as Associate Professor in Prime University. Dr. Bikash Barua also served as Associate Professor and Coordinator, BBA program at Department of Business Administration at State University of Bangladesh. He also served AIUB and Premier University, Chittagong as Assistant Professor and Lecturer respectively. Dr. Bikash Barua also worked as Assistant Engineer at Bashundhara Steel Mills Ltd. Dr. Bikash Barua earned his PhD degree from Bangladesh University of Professionals. He obtained Master of Business Administration (MBA) degree from Asian Institute of Technology (AIT), Thailand. He completed Bachelor of Science in Engineering (BSc. Engg.) from Bangladesh University of Engineering and Technology (BUET), Bangladesh.

**Marzan Kazi Rubye** is currently pursuing a Bachelor of Business Administration (BBA) in Human Resource Management under the Faculty of Business Administration at the American International University–Bangladesh (AIUB). He completed his schooling at Border Guard Public School, Jashore, and higher secondary education at Jashore Shikkha Board Government Model School and College. He has been recognized for his academic excellence with an AIUB Academic Scholarship and Dean’s List Honor. Alongside his studies, he has engaged in leadership and co-curricular activities as a general member at the AIUB Oratory Club, Sub-Executive at AIUB Economics Club, and General Member at AIUB Volunteer Unit, as well as a Management volunteer for the Bangladesh Mathematical Olympiad. His research interests include human resource management, artificial intelligence, Statistics, Statistical analysis, teaching methodologies. He aspires to build a career in academia as a university faculty member, to contribute to teaching, research, and knowledge creation in the field of business and administration.