

Asef Shahriar


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 [LinkedIn](#) |  [GitHub](#) |  [Personal Website](#)

EDUCATION

• Bachelor of Science in Industrial & Production Engineering

February 2017 - April 2022

Khulna University of Engineering & Technology (KUET) 


Khulna, Bangladesh

- CGPA: 3.94/4.00 (Degree with honors)
- Merit Position: 1st out of 71
- Achievements: Prime Minister's Gold Medal, University Gold Medal, Dean's List Honoree, Technical Education Scholarsip

PROFESSIONAL EXPERIENCE

• Lecturer

December 2022 - Present

Khulna University of Engineering & Technology (KUET) 

Khulna-9203, Bangladesh

- Delivered theory courses in Operations Research, Engineering Economy, Manufacturing Process, and Robotics to classes of approximately 60 students each
- Instructed laboratory sessions on Operations Research, Industrial Automation and Robotics, providing hands-on guidance and overseeing practical experiments
- Set question papers and evaluated scripts to assess student performance
- Prepared annual report of the department and assisted in the procurement of laboratory equipment, including setting technical specifications and participating in offer evaluations to ensure quality and functionality

RESEARCH AND PUBLICATIONS

- Md Abrar Jahin, Asef Shahriar, Md Al Amin (2024). **MCDNF: Supply Chain Demand Forecasting via an Explainable Multi-Channel Data Fusion Network Model Integrating CNN, LSTM, and GRU.** Submitted to Array Journal.
Contribution: Conceptualization, Methodology, Software implementation, Data curation and visualization, Writing - Original draft preparation.
- Md Al Amin, Azizur Rahman, Asef Shahriar (2020). **Application of Theory of Constraints in Supply Chain Management.** in *International Conference on Mechanical, Industrial and Energy Engineering 2020*, pp. ICMIEE20-188-(1-7). 19-21 December, 2020, Khulna, Bangladesh.
Contribution: Methodology, Visualization, Formal analysis, Writing - Review and Editing.

Ongoing Projects:

- **Two-Stage Community Resilience Prediction Model Integrating Grey and Rough Set Theories**
Highlights: Developing a periodic prediction model that combines grey theory and rough set theory, validated through a case study to assess its effectiveness.
Mentor: [Dr. Niamat Hossain](#)
- **Analyzing the Challenges of Smart Grid Implementation in Bangladesh Using Grey Influence Analysis**
Highlights: Applying Grey Influence Analysis (GINA) to explore and understand challenges in smart grid implementation.
- **Modeling and Optimization of Aluminum Alloy Drilling Operation - Research Assistant**
Responsibility: Performing machining operations according to experimental design, funded by the University Grants Commission Bangladesh.
Project Director: [Dr. Mst. Nazma Sultana](#)

Undergraduate Thesis:

- **Performance Comparison of Deep Learning Techniques for Supply Chain Demand Forecasting**
Highlights: Developed and optimized seven deep learning models for demand forecasting using historical sales data. Achieved superior results with sequence models, particularly LSTM and Bi-LSTM, demonstrating their effectiveness.
Supervisor: [Md. Al Amin](#).

RESEARCH INTEREST

Methodologies: Optimization, Stochastic Decision Models, Data-driven Machine Learning

Application Areas: Healthcare, Supply Chain

SKILLS

Technical Skills:

- **Programming Languages:** C (Fundamental, Data Structures, and Algorithms), C++, Python (Data Analytics, Visualization, Machine Learning, Deep Learning, Statistical Analysis, Simulation), SQL
- **System Modeling and Decision Analysis:** LINGO, GAMS, GUROBI
- **Statistical Analysis and Quality Management:** IBM SPSS, Minitab, Design-Expert, Stata (Econometrics)
- **Office Suites:** Microsoft 365, Google Workspace
- **Markup and Typesetting:** HTML, LaTeX, Markdown
- **Web Development Frameworks:** Django, Flask
- **Databases:** MySQL, PostgreSQL
- **Computer Aided Design:** AutoCAD, SOLIDWORKS
- **Automation and Control Systems:** PLC (Schneider Electric, Siemens), Arduino, HMI





Soft Skills: Resilience, Team-work, Organization

Languages: English(Proficiency: C1), Bengali(Mother Tongue)

PROFESSIONAL AFFILIATIONS

- [The Institution of Engineers, Bangladesh](#) - Associate Member (2023)
- [Industrial Engineers Association of Bangladesh \(IEAB\)](#) - Associate Member (2023)

HONORS AND AWARDS

- **Prime Minister's Gold Medal 2021** Nominated
University Grants Commission of Bangladesh 
 - Nominated for completing bachelor degree with highest CGPA among all the graduates of the Faculty of Mechanical Engineering, KUET during academic session 2019-2020.
- **University Gold Medal** Nominated
Khulna University of Engineering & Technology 
 - Nominated for securing the 1st position in Department of Industrial Engineering and Management, maintaining CGPA above or equal to 3.75, and completing undergraduate course work within four consecutive academic years.
- **Dean's List Honoree (4)** February 2023
Faculty of Mechanical Engineering, Khulna University of Engineering & Technology 
 - Received four awards consecutively in recognition of maintaining an average GPA of 3.75 or above across two regular terms in an academic year.
- **ISCEA PTAK Prize Case Competition - 60% Scholarship** July 2021
International Supply Chain Education Alliance Bangladesh 
- **GPH Ispat Esho Robot Banai - Campus Hackathon Winner** March 2019
GPH Ispat & Channel i
- **Technical Education Scholarship** 2017-2020
Ministry of Education, Bangladesh
- **Junior School Certificate Examination Scholarship** January 2012
Board of Intermediate and Secondary Education, Chattogram

SERVICE, LEADERSHIP AND VOLUNTEERING EXPERIENCE

- **Reviewer** April 23-25, 2024
5th African International Conference on Industrial Engineering and Operations Management Johannesburg, South Africa
 - Peer reviewed two technical papers in industrial engineering field
- **Publicity and Social Welfare Secretary** January 2024 - Present
Teachers' Association, KUET
 - Organized three general meetings, several national event on associations part to uphold the unity and collective interest

- Advocated for and secured financial aid for ailing teachers, and mobilized donation drives during national emergencies such as flood
- **President, Treasurer, Executive Member** *February 2018 - April 2022*
IEM Robotics & CAD Club
 - Organized and facilitated over five technical workshops covering topics such as computer programming, robotics, and CAD, significantly enhancing participants' skills and knowledge
 - Provided hands-on guidance and mentorship in programming and introductory robotics workshops to boost students' technical expertise
- **President, Paper & Resource Secretary, Volunteer** *February 2017 - March 2022*
Dream - Voluntary Blood Donation Society of KUET
 - Participated in three blood donation motivational campaigns at different high schools in the Khulna Division
 - Successfully convinced over a hundred individuals to donate blood and plasma during this period
 - Coordinated voluntary activities with fellow volunteers, motivating and encouraging individuals to donate blood
 - Documented and verified critical information, procuring and managing necessary medical resources to ensure smooth operations
- **Research and Publication Secretary** *January 2022 - April 2022*
IEM Association, Khulna University of Engineering & Technology
 - Actively contributed to the publication of a departmental bulletin, showcasing achievements, future plans, ongoing research, and student activities, highlighting the department's growth and academic excellence.

PROFESSIONAL TRAINING AND ONLINE COURSES

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|---|----------------------|
| • KUET/IQAC: Research and Publication | <i>November 2024</i> |
| • KUET/IQAC: OBE Curriculum Design, Teaching-Learning and Assessment Strategies | <i>June 2024</i> |
| • KUET/IQAC: Outcome-Based Education (OBE) | <i>May 2024</i> |
| • KUET/IQAC: Workshop on Research Integrity and Publication Ethics | <i>December 2023</i> |
| • Gurobi Optimization: Gurobi: Optimization 201 for Data Scientists | <i>November 2023</i> |
| • KUET/IQAC: Roles, Responsibilities and Ethical Principles of University Teachers | <i>July 2023</i> |
| • KUET/IQAC: Industry 4.0: Perspective to Future Skills Demand | <i>March 2023</i> |
| • KUET/IQAC: Workshop on Project Management (Proposal to Successful Completion) | <i>February 2023</i> |
| • Coursera/DeepLearning.AI: Deep Learning Specialization | <i>May 2020</i> |
| • Coursera/DeepLearning.AI: TensorFlow Developer Specialization | <i>May 2020</i> |
| • Coursera/Imperial College London: Mathematics for Machine Learning: Linear Algebra | <i>June 2020</i> |
| • edX/MITx: 6.00.1x: Introduction to Computer Science and Programming Using Python | <i>March 2019</i> |

REFERENCES

1. **Dr. Niamat Hossain**
Assistant Professor of Engineering Management, Arkansas State University
Email: nibnehossain@AState.edu | Phone: +16624971129
Relationship: Research Mentor
2. **Dr. Md. Saiful Islam**
Associate Professor, Department of Industrial Engineering and Management
Khulna University of Engineering & Technology
Email: saifuliem@iem.kuet.ac.bd | Phone: +8801916966396
Relationship: Course Teacher, colleague
3. **Md. Al Amin**
Assistant Professor, Department of Industrial Engineering and Management
Khulna University of Engineering & Technology
Email: m.alamin@iem.kuet.ac.bd | Phone: +97477897465
Relationship: Undergraduate Thesis Supervisor, Coauthor, Course Teacher