SM KAMRUZZAMAN

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Research Interest

Data Science & Machine Learning, Operations Research, Optimization, Internet of Things, Wireless Sensor Network, Industry 4.0.

Education & Test Scores

2014-2018	Rajshahi University of Engineering & Technology	*Rajshahi-6204, Bangladesh*
	BSc in Industrial & Production Engineering *[CGPA: 3.13]*	

GRE:	Q: 161	V: 149	AWA: 3.5 *[Total: 310]*	*Year: 2021*
TOEFL:	R: 17	L: 28	S: 22 W: 26 *[Total: 93]*	*Year: 2023*

Technical Skills

Language and Scripts: C, Python, MATLAB Programming, HTML, CSS, MySQL

Design and Simulation: Autodesk Inventor, Solidworks, AutoCAD

Operating System: Windows, Linux (Kali, Ubuntu)

Statistics: IBM SPSS, Minitab

Field of Interest and Experience

Internet of Things: Developing wireless sensor network (Undergrad. Research)

Optimization: Solving optimization problems applying different Novel algorithms.
Environment: MATLAB, PYTHON
Network optimization, Vehicle Routing Problem, Travelling Salesman Problem Optimization, Time Series Forecasting

Data Science and ML: Data collection, Data preprocessing, Data analysis, Developing models.
Training and Testing ML Models.

Python Packages: Data analysis and Processing, Machine Learning and Deep Learning, Time Series Forecasting, Data Visualization, Feature Engineering.

Undergraduate Research and Project Works

Thesis Title: Integrated IoT Framework with WSN for Monitoring Industrial Environment and Controlling Appliances in the Context of Industry 4.0.
Objectives:
1. To design a Wireless Sensor Network system and implement it in the industrial environment (prototype scale).
2. To develop a website for using it as an interface for monitoring and controlling functions.
3. Develop a local server for hosting the website – using Raspberry-Pi

Case Study Title: Effects of Language Barrier in International Trade.
Objectives:
1. To find out whether language is a barrier in international trade or not.
2. To recommend remedies to overcome the barrier.

Project Design and Development of a Mini CNC Plotter using Arduino.
1. To develop a low-cost device that can plot an image on a paper with pen.

a. 3-Axis numeric control system
b. G-code to control the toolpath
c. Using open-source software (Inkscape) for converting image to G-code
d. Using open-source program (JAVA) as a user-interface

Publications

1. A Supervisory Control of Home Appliances using Internet of Things. (DOI: 10.1109/ECACE.2019.8679314) International Conference on Electrical, Computer and Communication Engineering (ECCE), Cox'sBazar, Bangladesh, 2019. Priyo Nath Roy, Maniza Armin, SM Kamruzzaman, Md Emdadul Hoque

Professional Experience and Internships

2019 August-Present	**United Surgical Limited, Bangladesh**	*Gazipur, Bangladesh*

Senior Engineer, New Product Development
- Process Improvement by optimizing process parameters.
- Process planning, material planning and forecasting, manpower planning.
- Sourcing raw materials and machinery.
- Waste reduction by monitoring process.
- Quality Management System.
- Inventory monitoring and Optimization.
- Facility Layout & Optimization
- New Project Planning and Execution.
- Bill of Materials making and auditing

2016 (July)	Industrial Attachment Training: Confidence Infrastructure Limited	*Dhaka, Bangladesh*

Activities

2014-2018	Volunteer	*Rajshahi, Bangladesh*

NIROB – Nirapod Rokter Bandhan (A voluntary blood donation organization)

2017-2018	Class Representative	*Rajshahi, Bangladesh*

Dept. of Industrial & Production Engineering, Rajshahi University of Engineering & Technology

2018	Organizer & First Aider	

Final year tour of Department of IPE, RUET

2017	Volunteer	*Rajshahi, Bangladesh*

FAB-LAB establishment in RUET (CNC Router M/C setup)

2017	Volunteer (Technical Support)	*Rajshahi, Bangladesh*

3rd International Conference of Mechanical, Industrial and Materials Engineering (ICMIME).
Venue: Rajshahi University of Engineering & Technology

2017	Second Runners Up	*Rajshahi, Bangladesh*

Intra RUET CAD Competition

Kaggle: https://www.kaggle.com/kamruzzamanselim
GitHub: https://github.com/KamruzzamanSelim/
Website: https://kamruzzamanselim.github.io/portfolio/index.html