SM KAMRUZZAMAN

Dhaka, Bangladesh

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EDUCATION

BSc in Industrial & Production Engineering

Rajshahi University of Engineering & Technology, Rajshahi, Bangladesh, 2018

CGPA: 3.13/4.0

EXPERIENCE

Senior Engineer, New Product Development, United Surgical Limited, Dhaka, Bangladesh, January 2024-Today

- Participated to the team of implementation of SAP systems to streamline business processes.
- Collaborated with cross-functional teams to ensure seamless integration of processes, materials, and technologies into production workflows.
- Conducted advanced data analysis to identify bottlenecks and recommend process optimization, achieving a 15% increase in production output.
- Championed compliance with international quality standards and regulatory requirements, enhancing product reliability and market reputation.
- Monitored and troubleshooted complex production issues, resolving critical challenges with minimal downtime.

Engineer, New Product Development, United Surgical Limited, Dhaka, Bangladesh, January 2021-December 2023

- Achieved process improvement by optimizing critical process parameters, reducing defects and enhancing product quality.
- Developed and executed process, material, and manpower plans, ensuring seamless operations and on-time project delivery.
- Procured raw materials and machinery by conducting cost-effective sourcing strategies and vendor negotiations.
- Reduced waste by implementing systematic process monitoring, achieving cost savings and sustainability goals.

Jr. Engineer, New Product Development, United Surgical Limited, Dhaka, Bangladesh, August 2019-December 2020

- Contributed to process improvement by optimizing process parameters, enhancing productivity and reducing downtime.
- Supported planning activities including material forecasting, manpower allocation, and production scheduling.
- Implemented waste reduction strategies by monitoring and analysing production processes.

TECHNICAL SKILLS

Programming Languages: Python, MATLAB, C, SQL

Machine Learning & AI: Data Cleaning, Feature Engineering, Regression Analysis, Classification, Clustering, Time Series Forecasting, Deep Learning (LSTM, CNN), Hyperparameter Tuning, Model Evaluation

Data Analysis & Visualization: Excel, Matplotlib, Seaborn, NumPy, SciPy, Pandas

Optimization & Operations Research: Linear Programming, Evolutionary Algorithms, Travelling Salesman Problem, Vehicle Routing Problem

Databases & Query Languages: MySQL, SQL

Version Control & Collaboration: Git, GitHub

Software Development & Tools: Jupyter Notebook, Anaconda, PyCharm, MATLAB IDE

IoT & Sensor Data Analytics: Wireless sensor network, Wireless modules, Raspberry PI

Other Tools & Libraries: Scikit-learn, TensorFlow, Keras, OpenCV, Google Colab, Kaggle

Design and Simulation: Solidworks, AutoCAD, Inventor, Fusion

RESEARCH AND PROJECT WORKS

Project 1: Net-Load Forecasting Using Hybrid Models. (Ongoing)

- Developed LSTM-XGBoost and Random Forest-LSTM hybrid models for time series forecasting.
- Used feature engineering and hyperparameter tuning to improve accuracy.
- Tools: Python, TensorFlow, Scikit-learn

Project 2: Integrated IoT Framework with WSN for Monitoring Industrial Environment and Controlling Appliances in the Context of Industry 4.0.

- To design a Wireless Sensor Network system and implement it in the industrial environment (prototype scale).
- To develop a website for using it as an interface for monitoring and controlling functions.
- Develop a local server for hosting the website – using Raspberry-Pi

Project 3: Effects of Language Barrier in International Trade.

- To find out whether language is a barrier in international trade or not.
- To recommend remedies to overcome the barrier.

Project 4: Design and Development of a Mini CNC Plotter using Arduino.

- To develop a low-cost device that can plot an image on a paper with pen.
- 3-Axis numeric control system.
- G-code to control the toolpath.
- Using open-source software (Inkscape) for converting images to G-code.
- Using open-source program (JAVA) as a user-interface.

Publications

1. **Supervisory Control of Home Appliances using Internet of Things.** International Conference on Electrical, Computer and Communication Engineering (ECCE), Cox's Bazar, Bangladesh, 2019.

CERTIFICATIONS

1. **Data Science Methodology**, Coursera
2. **Python for Data Science and AI,** Coursera
3. **Data Analysis Using Python,** IBM
4. **Data Science Orientation,** Coursera
5. **Excellence in Excel-Workshop,** IEEE, RUET Branch

INTERESTS & HOBBIES

Interests: Industrial Automation, Data Visualization, Machine Learning for Optimization
Hobbies: Cycling, Hiking, Photography

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