

MOHAMMAD NASFIKUR RAHMAN KHAN

Montgomery, AL 36116 | 2513073726 | dr.nasfik.khan@gmail.com | USA Permanent Resident

Professional Summary

Dr. Mohammad Nasfikur Rahman Khan is an Endowed Associate Professor at Midwestern State University and an expert in automation, robotics, and immersive technology. He blends nine years of academic experience with seven years of industrial leadership at global firms like Hyundai, Austal USA, Quincy and Thermo Systems. Dr. Khan holds a Ph.D. in Systems Engineering. His breakthrough research focuses on Digital Twins, AI, and Metaverse, yielding over 55 peer-reviewed publications. A dedicated educator, he has mentored over 48 students, manages large-scale design projects, and serves as an active reviewer for leading IEEE conferences.

Education

Ph.D.: Systems Engineering 08/2025

University of South Alabama - Mobile, AL

- Expertise: Industrial System Design, Digital Twin, Artificial Intelligence & Immersive Technology
- Scholarship: Full-funding Graduate Assistantship II awarded
- Mentoring: Mentored 2 PhD students on learning the Virtual Environment
- Award: Robert J. Cloutier Scholarship in Systems Engineering
- Dissertation: Designing an Unconscious Bias Triggering System by Using Virtual Patients

Master of Science: Systems Engineering 05/2023

University of South Alabama - Mobile, AL

- Working with Metaverse, Digital Twin, and Virtual Environment in Industrial Application
- Fully Funded Graduate Assistantship Recipient
- President - INCOSE University of South Alabama Student Chapter

Master of Science: Biomedical Engineering 08/2015

Newcastle University - Newcastle, UK

- Award: 100% Graduate scholarship awarded
- President of IEEE: Newcastle University [2014 - 2015]
- Thesis: Improving The Controlling System of A Finger Simulator

Bachelor of Science: Electrical and Electronic Engineering 06/2014

Sheffield Hallam University - Sheffield, UK

- Expertise: Digital Electronics and Microprocessor-based Industrial Automation System
- Scholarship: Government scholarship recipient for high school results
- Senior Project: Designing a home automation system using a Microcontroller

Academic and Industrial (Manufacturing & Construction) Experiences

Academic Experiences

August 2026 - Current

Endowed Associate Professor – Midwestern State University, Wichita Falls, TX

- Delivered 12 credits of Electrical Engineering coursework per semester.
- Formulated advanced electrical curriculum integrating engineering automation and robotics.
- Spearheaded research on immersive virtual reality environment implementations.
- Engineered real-time spatial tracking algorithms for integrating virtual human.
- Mentored senior undergraduate students on electrical design capstones.
- Published peer-reviewed research on virtual environment system architectures.

January 2022 - May 2022

Graduate Research Assistant II - University of South Alabama, Mobile, AL

- Mentored two PhD students in Systems Engineering.
- Developed AI-driven virtual patient simulations to improve clinical reasoning.
- Implemented dynamic virtual patients with realistic feedback for skill assessment.
- Integrated language models and speech recognition for natural clinical interactions.
- Embedded adaptive feedback systems to support self-directed learning and competency growth.
- Applied interdisciplinary methods combining AI, systems engineering, and medical education to enhance simulation accessibility and reduce bias.

August 2021 - December 2021

Graduate Teaching Assistant - Dept. of ECE, University of South Alabama, Mobile, AL

- Monitored and assisted in 2 higher-level courses (Digital Logic Design and VLSI)
- Assisted in course documentation, running classes, and grading students

May 2017 - July 2021

Lecturer / Instructor – Dept of Electrical and Electronic Engineering, *Independent University*

- Designed critical thinking skills through challenging assignments that required analysis, synthesis, and evaluation of information from various sources.
- Served on curriculum development committees, contributing valuable input toward program improvement initiatives within the department.
- Supervised 20 undergrad students and 12 group projects.
- Participated in professional development workshops focused on pedagogical innovations, enhancing overall effectiveness as an educator.
- Bridged the gap between theory and practice by organizing guest lectures from industry professionals, exposing students to current trends in electronics engineering. Developed

comprehensive lesson plans incorporating hands-on activities to reinforce theoretical knowledge better.

December 2015 - April 2017

Lecturer / Instructor – Dept of Electrical and Electronic Engineering, *City University*

- Promoted diversity and inclusion within the electrical engineering program by incorporating multicultural perspectives into course materials and classroom discussions.
- Enhanced student understanding of complex electronics engineering concepts by incorporating real-world examples and case studies into lectures.
- Organized workshops and seminars featuring industry professionals to expose students to current electrical and electronics engineering trends.
- Supervised four undergrad students and four individual projects.

June 2015 - February 2016

Research Engineer - AIMS Laboratory, Dhaka, Bangladesh

- Assisted in designing three automation projects with an integrated control system.
- Analyzed and calibrated equipment, established conditions, and prepared reports.

Manufacturing Experiences

March 2026 – July 2026

Engineering Assistant Manager – Hyundai Glovis – Montgomery, AL

- Led automotive logistics engineering projects supporting vehicle manufacturing supply chains.
- Optimized automated material handling systems to maximize warehouse throughput efficiency.
- Deployed lean manufacturing methodologies to eliminate waste and reduce cycle times.
- Synchronized just-in-time delivery schedules with plant production requirements to minimize downtime.
- Oversee engineering budget allocations and equipment procurement for regional operations.
- Manage preventive and predictive maintenance to ensure equipment reliability.

January 2025 – September 2025

Senior Maintenance Engineer – Hyundai Mobis – Montgomery, AL

- Manage preventive and predictive maintenance to ensure equipment reliability.
- Diagnose and resolve process issues using root cause analysis.
- Coordinate with internal teams and external partners to complete projects.
- Develop and implement solutions to improve equipment performance and up time.
- Lead maintenance staff, promoting safety and environmental standards.
- Apply new technologies to enhance existing and future assets.

- Operate and maintain robotics, PLCs, and VFDs regularly.

August 2023 – December 2024

Electrical Engineer – Austal USA – Mobile, USA

- Conducted electrical maintenance and repairs using TPM, FMEA, FTA, and CLD; implemented hydraulic systems for control functions.
- Diagnosed and resolved complex electrical issues on naval and commercial vessels.
- Led and mentored junior engineers, providing technical guidance and training.
- Improved design accuracy and reduced delivery time with advanced CAD tools.
- Coordinated with multidisciplinary teams and stakeholders to ensure compliance and timely project completion.
- Delivered customized engineering solutions that exceeded client expectations.

May 2023 - August 2023

Electrical Engineer (Intern) – Quincy Compressor – Atlas Copco – Bay Minette, AL

- Assist in design, testing, and troubleshooting of electrical systems for compressor products.
- Collaborate with engineers and technicians to improve electrical components and system reliability.
- Support documentation, quality assurance, and technical communication tasks.
- Engage in hands-on work in manufacturing and maintenance environments.
- Develop practical skills in electrical engineering tools and industry standards through real-world applications.

Construction Experiences

September 2025 – March 2026

Lead Control Systems Engineer – Thermo Systems – Montgomery, AL

- Lead design and integration of automation and control systems for construction projects.
- Supervise engineers and technicians during installation and commissioning.
- Configure and validate PLC, HMI, and SCADA systems for seamless operation.
- Coordinate with clients and contractors to align system requirements.
- Ensure quality, safety, and documentation compliance throughout project execution.

January 2018 – July 2021

Electrical Automation Engineer (R&D) – AABTech Engineering – **Dhaka, Bangladesh**

- Assisted in completing projects by coordinating tasks, monitoring progress, and maintaining documentation.
- Planned, monitored, and analyzed project costs to meet financial goals.
- Established strong relationships with clients by providing exceptional service on all aspects of their electrical automation projects from conception through completion.

- Provided technical support for existing automated systems, resulting in reduced response times and increased system reliability.
- Conducted regular system audits to ensure compliance with the industry's best practices and regulatory requirements.

Research

PUBLICATIONS ~ 55+

First & Corresponding Author ~ 40+

Google Citations: 544, i-10 index: 20 & h-index: 14

Google Scholar Link: <https://scholar.google.com/citations?user=EARMB2cAAAAJ&hl=en&oi=sra>

Selected Publications

Book – Indexed in ACM - 2

1. **Nasfikur R. Khan**, Faisal Bin Shahin, and Sarmila Yesmin. 2017. Improving The Controlling System of a Finger Simulator: Research work has been performed on the lab facilities of Biomedical Engineering Department, Newcastle University, UK. Scholars Press.
URL: <https://dl.acm.org/doi/book/10.5555/3203576>
2. **M. N. R. Khan** and S. Walker (2025) A System to Detect Unconscious Bias Using Virtual Patients—System Integration Plan. Journal of Visualized Experiments; Special Issue: Recent Advancements in Quantum Computing; will be indexed in PubMed and Web of Science.

Published by Springer and CRC - 18

3. **Khan M. R.**, Cloutier R., Lippert K. (2024) Risk Analysis of Implementing Immersive Technology in the Healthcare System. Changing Competitive Business Dynamics Through Sustainable Big Data Analysis. Bentham Science.
URL: <https://www.benthamscience.com/chapter/22816>
4. **Khan M. R.**, Cloutier R., Lippert K. (2023) A Systems Architecture of Immersive Technology-Based Healthcare Education System. Intelligent Learning Paradigm and Student Empowerment. 2023 Apple Academic Press Inc.
URL: <https://www.taylorfrancis.com/chapters/edit/10.1201/9781032721699-4/>
5. **Khan M. R.**, Lohar B., Cloutier R., Lippert K. (2023) Test Plan for Immersive Technology-Based Medical Support System. Cyber Security and Business Intelligence. Routledge, CRC Press, Taylor and Francis Group, USA.
URL: <https://www.taylorfrancis.com/chapters/edit/10.4324/9781003285854-6>
6. **Khan M. R.**, Lippert K. (2022) Immersive Technologies in Medical Sciences: A Systematic Review. Intelligent Learning Paradigm and Student Empowerment: Digital Integration and Transformation. Taylor and Francis Group, USA.

URL: <https://www.taylorfrancis.com/chapters/edit/10.1201/9781003286745-6>

7. **Khan M. R.**, Lippert K. (2022) A Framework for a Virtual Reality-based Medical Support System. ISMLI 2022: Intelligent Systems and Machine Learning for Industry: Advancements, Challenges, and Applications. Taylor and Francis Group, USA.

URL: <https://www.taylorfrancis.com/chapters/edit/10.1201/9781003286745-1>

8. **Khan M.N.R.**, Ara J., Yesmin S., Abedin M.Z. (2022) Machine Learning Approaches in Cybersecurity. In: Jacob I.J., Kolandapalayam Shanmugam S., Bestak R. (eds) Data Intelligence and Cognitive Informatics. Algorithms for Intelligent Systems. Springer, Singapore.

URL: https://doi.org/10.1007/978-981-16-6460-1_26

9. **Khan M.N.R.**, Saha H., Yesmin S., Abedin M.Z. (2022) An Innovative Framework by Using Metaheuristic Algorithms for Detecting Fake News on Social Media. In: Jacob I.J., Kolandapalayam Shanmugam S., Bestak R. (eds) Data Intelligence and Cognitive Informatics. Algorithms for Intelligent Systems. Springer, Singapore.

URL: https://doi.org/10.1007/978-981-16-6460-1_27

10. **Khan M.N.R.**, Tasnim F., Yesmin S., Abedin M.Z. (2022) Review of City Pricing System Analysis Based on Big Data. In: Jacob I.J., Kolandapalayam Shanmugam S., Bestak R. (eds) Data Intelligence and Cognitive Informatics. Algorithms for Intelligent Systems. Springer, Singapore.

URL: https://doi.org/10.1007/978-981-16-6460-1_25

11. **Khan M.N.R.**, Shakir A.K., Nadi S.S., Abedin M.Z. (2022) An Android Application for University-Based Academic Solution for Crisis Situation. In: Shakya S., Balas V.E., Kamolphiwong S., Du KL. (eds) Sentimental Analysis and Deep Learning. Advances in Intelligent Systems and Computing, vol 1408. Springer, Singapore.

URL: https://doi.org/10.1007/978-981-16-5157-1_51

12. **Khan M.N.R.**, Bala S., Yesmin S., Abedin M.Z. (2022) Bioinformatics: The Importance of Data Mining Techniques. In: Shakya S., Balas V.E., Kamolphiwong S., Du KL. (eds) Sentimental Analysis and Deep Learning. Advances in Intelligent Systems and Computing, vol 1408. Springer, Singapore.

URL: https://doi.org/10.1007/978-981-16-5157-1_32

13. **Khan M.N.R.**, Khan M.R., Mashuk A.K.E.H., Sunny F.I., Farhan S.K.A., Shukhon R.N.S. (2020) An Android Application to Calculate the Average Chemical Presence in Food Items. In: Dawn S., Balas V., Esposito A., Gope S. (eds) Intelligent Techniques and Applications in Science and Technology. ICIMSAT 2019. Learning and Analytics in Intelligent Systems, vol 12. Springer, Cham.

URL: https://doi.org/10.1007/978-3-030-42363-6_16

14. Azim M., Hossain M.Q.R., **Khan M.N.R.**, Chowdhury T., Abdur Razzak M. (2021) Six-Wheeled Wireless Bomb Defusal Rover. In: Komanapalli V.L.N., Sivakumaran N., Hampannavar S. (eds) Advances in Automation, Signal Processing, Instrumentation, and Control. Lecture Notes in Electrical Engineering, vol 700. Springer, Singapore.

URL: https://doi.org/10.1007/978-981-15-8221-9_96

15. Chowdhury K.B.Q., Hasani A.M.A., Labeeb K., Raihanul Karim M., Mashuk A.K.E.H., **Khan M.N.R.** (2020) IOT Based Garbage Monitoring and Clearance Alert System. In: Dawn S., Balas V., Esposito A., Gope S. (eds) Intelligent Techniques and Applications in Science and Technology. ICIMSAT 2019. Learning and Analytics in Intelligent Systems, vol 12. Springer, Cham.
URL: https://doi.org/10.1007/978-3-030-42363-6_20
16. Hossain M.Q.R., Azim M., Chowdhury T., Prince A.S., Ahmed M., **Khan M.N.R.** (2020) Six-Wheeled All-Terrain Multipurpose Vehicle. In: Dawn S., Balas V., Esposito A., Gope S. (eds) Intelligent Techniques and Applications in Science and Technology. ICIMSAT 2019. Learning and Analytics in Intelligent Systems, vol 12. Springer, Cham.
URL: https://doi.org/10.1007/978-3-030-42363-6_12

Published and Indexed by IEEE Xplore - 26

17. **M. N. R. Khan** and S. Walker, "A System to Detect Unconscious Bias Using Virtual Patients: Risk Analysis, Test and Integration Plan," 11th IEEE International Conference on Virtual Reality, Wageningen, Netherlands 18-20 February 2025 (Accepted).
18. **M. N. R. Khan** and S. Walker, "A System to Detect Unconscious Bias Using Virtual Patients: Concept of Operations," 2025 IEEE Integrated STEM Education Conference (ISEC), Princeton, NJ, USA, 2025, pp. 1-5, doi: 10.1109/ISEC64801.2025.11147394.
19. **M. N. R. Khan** and S. Walker, "A System to Detect Unconscious Bias Using Virtual Patients: System Specifications," 15th IEEE Integrated STEM Education Conference (ISEC), Princeton University, NJ, USA, March 15, 2025.
20. **M. N. R. Khan** and S. Walker, "A System to Detect Unconscious Bias Using Virtual Patients - System Architecture," 2024 International Conference on IT Innovation and Knowledge Discovery (ITIKD), Manama, Bahrain, 2025, pp. 1-5, doi: 10.1109/ITIKD63574.2025.11005206.
21. **M. N. R. Khan** and S. Walker, "A System to Detect Unconscious Bias Using Virtual Patients: Understanding the Concept in Details," 2025 4th International Conference on Sentiment Analysis and Deep Learning (ICSADL), Bhimdatta, Nepal, 2025, pp. 821-825, doi: 10.1109/ICSADL65848.2025.10933464.
22. **M. N. R. Khan**, F. Ahmmed, M. K. Al Zabir, B. Lohar, S. Walker and K. J. Lippert, "Concept Exploration of Virtual Humans in Education," 2024 IEEE International Conference on Smart Systems and Technologies (SST), Osijek, Croatia, 2024, pp. 95-100, doi: 10.1109/SST61991.2024.10755230.
23. **M. N. Rahman Khan**, F. Ahmmed, M. K. Al Zabir and K. J. Lippert, "Virtual Patient in Medical Education," 2023 7th International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT), Ankara, Turkiye, 2023, pp. 1-6, doi: 10.1109/ISMSIT58785.2023.10304938.
24. **M. N. R. Khan**, K. Lippert and R. J. Cloutier, "A Systems-oriented Approach to Medical Education Incorporates Virtual Patients and Gamification," 2023 IEEE 27th International Conference on Information Technology (IT), Zabljak, Montenegro, 2023, pp. 1-5, doi: 10.1109/IT57431.2023.10078624.

25. **M. N. R. Khan**, M. Rabbi, K. Al Zabir, K. Dewri, S. A. Sultana and K. J. Lippert, "Internet of Things-Based Educational Paradigm for Best Learning Outcomes," 2022 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI), 2022, pp. 1-8, doi: 10.1109/ACCAI53970.2022.9752569.
26. K. Lippert, **M. N. R. Khan**, M. M. Rabbi, A. Dutta and R. Cloutier, "A Framework of Metaverse for Systems Engineering," 2021 IEEE International Conference on Signal Processing, Information, Communication & Systems (SPICSCON), Dhaka, Bangladesh, 2021, pp. 50-54, doi: 10.1109/SPICSCON54707.2021.9885722.
27. **M. N. Rahman Khan**, S. Yesmin, M. Aktar, K. B. Quader Chowdhury, K. Labeeb and M. Z. Abedin, "Techniques for Multi-Omics Data Incorporating Machine Learning and System Genomics," 2021 6th International Conference on Communication and Electronics Systems (ICCES), Coimbatore, India, 2021, pp. 1524-1528, doi: 10.1109/ICCES51350.2021.9489222.
28. **M. N. R. Khan**, H. Haque, K. Labeeb, M. Aktar, R. K. Datta and M. Z. Abedin, "Internet of Things and Wireless Sensor Network Solution in Smart Environmental Monitoring," 2021 6th International Conference on Communication and Electronics Systems (ICCES), 2021, pp. 1-5, doi: 10.1109/ICCES51350.2021.9489101.
29. **M. N. R. Khan**, A. K. E. H. Mashuk, W. F. Durdana, M. Alam, R. Roy, and M. A. Razzak, "Doctor Who?" - A Customizable Android Application for Integrated Health Care," 2019 10th International Conference on Computing, Communication and Networking Technologies (ICCCNT), 2019, pp. 1-6, doi: 10.1109/ICCCNT45670.2019.8944501.
30. **M. N. R. Khan**, W. F. Durdana, R. Roy, G. Poddar, S. Ferdous and A. K. E. H. Mashuk, "Health Guardian - A Subsidiary Android Application for Maintaining Sound Health," 2018 International Conference on Recent Innovations in Electrical, Electronics & Communication Engineering (ICRIEECE), 2018, pp. 1406-1409, doi: 10.1109/ICRIEECE44171.2018.9008485.
31. **M. N. Rahman Khan**, S. Yesmin, M. Aktar, K. B. Quader Chowdhury, K. Labeeb and M. Z. Abedin, "Techniques for Multi-Omics Data Incorporating Machine Learning and System Genomics," 2021 6th International Conference on Communication and Electronics Systems (ICCES), 2021, pp. 1524-1528, doi: 10.1109/ICCES51350.2021.9489222.
32. **M. N. R. Khan**, F. B. Shahin, F. I. Sunny, M. R. Khan, A. K. E. Haque Mashuk, and K. A. Al Mamun, "An Innovative and Augmentative Android Application for Enhancing Mediated Communication of Verbally Disabled People," 2019 10th International Conference on Computing, Communication and Networking Technologies (ICCCNT), 2019, pp. 1-5, doi: 10.1109/ICCCNT45670.2019.8944655.
33. **M. N. R. Khan**, F. Bin Shahin, M. Alam, A. K. Ehsanul Haque Mashuk, S. K. Adif Farhan and M. M. Tanzirul Iqbal, "Chronological Way to Represent Humanoid Robot," 2018 International Conference on Recent Innovations in Electrical, Electronics & Communication Engineering (ICRIEECE), 2018, pp. 1401-1405, doi: 10.1109/ICRIEECE44171.2018.9008494.
34. **M. N. R. Khan**, M. M. T. Iqbal, S. Yesmin, A. K. E. H. Mashuk, F. B. Shahin and M. A. Razzak, "Development of an Automatic Detection of Pressure Distortion and Alarm System of Endotracheal Tube," 2018 IEEE-EMBS Conference on Biomedical Engineering and Sciences (IECBES), 2018, pp. 476-479, doi: 10.1109/IECBES.2018.8626676.

35. **M. N. R. Khan**, H. H. Sonet, F. Yasmin, S. Yesmin, F. Sarker and K. A. Mamun, "'Bolte Chai' — An Android application for verbally challenged children," 2017 4th International Conference on Advances in Electrical Engineering (ICAEE), 2017, pp. 541-545, doi: 10.1109/ICAEE.2017.8255415.
36. **M. N. R. Khan**, M. N. H. Pias, K. Habib, M. Hossain, F. Sarker, and K. A. Mamun, "Bolte Chai: An augmentative and alternative communication device for enhancing communication for nonverbal children," 2016 International Conference on Medical Engineering, Health Informatics and Technology (MediTec), 2016, pp. 1-4, doi: 10.1109/MEDITEC.2016.7835391.
37. M. M. Shah, **M. N. R. Khan**, M. R. A. Khan, M. M. H. Plabon and M. A. Razzak, "A Cost-Effective Smart Walking Stick for Visually Impaired People," 2021 6th International Conference on Communication and Electronics Systems (ICCES), 2021, pp. 1582-1585, doi: 10.1109/ICCES51350.2021.9489010.
38. S. A. Farhan, **M. N. Rahman Khan**, M. R. Swaron, R. N. Saha Shukhon, M. M. Islam and M. A. Razzak, "Improvement of Verbal and Non-Verbal Communication Skills of Children with Autism Spectrum Disorder using Human-Robot Interaction," 2021 IEEE World AI IoT Congress (AIIoT), 2021, pp. 0356-0359, doi: 10.1109/AIIoT52608.2021.9454193.
39. H. Haque, A. K. Chowdhury, **M. N. R. Khan**, and M. A. Razzak, "Demand Analysis of Energy Consumption in a Residential Apartment using Machine Learning," 2021 IEEE International IoT, Electronics and Mechatronics Conference (IEMTRONICS), 2021, pp. 1-6, doi: 10.1109/IEMTRONICS52119.2021.9422593.
40. S. Yesmin, S. S. Misty, K. Labeeb, **M. N. R. Khan**, R. K. Datta and M. Z. Abedin, "A Cost-effective IoT Based Fitness Tracker for Physically Challenged People," 2021 6th International Conference on Communication and Electronics Systems (ICCES), Coimbatore, India, 2021, pp. 626-630, doi: 10.1109/ICCES51350.2021.9489053.
41. H. Haque, K. Labeeb, R. B. Riha and **M. N. R. Khan**, "IoT Based Water Quality Monitoring System By Using Zigbee Protocol," 2021 International Conference on Emerging Smart Computing and Informatics (ESCI), Pune, India, 2021, pp. 619-622, doi: 10.1109/ESCI50559.2021.9397031.
42. K. Labeeb, K. B. Q. Chowdhury, R. B. Riha, M. Z. Abedin, S. Yesmin and **M. N. R. Khan**, "Pre-Processing Data in Weather Monitoring Application by Using Big Data Quality Framework," 2020 IEEE International Women in Engineering (WIE) Conference on Electrical and Computer Engineering (WIECON-ECE), Bhubaneswar, India, 2020, pp. 284-287, doi: 10.1109/WIECON-ECE52138.2020.9397990.

Other Peer-reviewed Publications -

43. **Khan, M.N.R.**, S. Walker (2025), Testing and Verification Process of A System for Triggering UBs in Medical Students by Using VPs. Systems Engineering, John Wiley and Sons Ltd. (Submitted).
44. **Khan, M.N.R.**, S. Walker (2025), A Logical System Architecture of Triggering UBs by Using VPs. Systems Engineering, INCOSE - International Council on Systems Engineering (Accepted).
45. **Khan, M.N.R.**, S. Walker (2025), A System Architecture of Implementing Immersive Technology in Medical Education. Systems Engineering, MDPI (Accepted).

46. **Md. Nasfikur R. Khan**, Sarmila Yesmin, “Improving controlling system of a finger simulator,” Asian Journal of Engineering and Technology, Vol 5 (4), August 2017. pp. 113-118.
47. **Md. Nasfikur R. Khan**, Md. Rakib Hasan, “Designing A Home Automation System By Using RF Receiver,” International Journal of Advance Research and Innovative Ideas in Education, Vol 3 (4), June 2017. pp. 2318 - 232.
48. **Khan, M. N. R.**, Alam, M., Farhan, S. A., Iqbal, M. T., Al Hasani, A. M., & Hasan, M. R. (2018). A Brief Discussion on Plastic Wastes Sortation Procedures. International Journal of Composite and Constituent Materials, 4(2), 1-7.
49. Alam, M., Shahin, F. B., Mashuk, A. E. H., Al Zabir, M. K., Khan, M. H., Roy, R., & **Khan, M. N. R.** (2018). Synthesis, Structural and Thermal Properties of Nanoporous Silica Aerogels. International Journal of Nanomaterials and Nanostructures, 4(1), 1-7. l.
50. **Md. Nasfikur R. Khan**, Md Ziaul Islam, and Md Mehedi Hasan, “Cos-effective and User-Friendly Customized Prosthetic Hands for Children - Design and Human Integration,” The Journal of City University, March 2016, Volume: 01, Issue: 02, Page: 63.
51. Md. Mehedi Hasan, **Md. Nasfikur R. Khan**, Md. Kamrul Islam and Md. Ziaul Islam, “Sustainable Electricity Generation at the coastal areas and the islands of Bangladesh,” The Journal of City University, March 2016, Volume: 01, Issue: 02, Page: 12.
52. Md Ziaul Islam, Mehedi Hasan, and **Md. N. R. Khan**, “Power Generation Engine Biomass Resources, according to meet the feature demand- Bangladesh perspective”, The Journal of City University, March 2016, Volume: 01, Issue: 02, Page: 29.

Total: 24 Individual (Students) and 12 Undergrad Group Projects Supervision

- Designing an Unconscious Bias Triggering System by Virtual Patients, 2025
- VR-based Medical Support System - Systems Architecture and Risk Analysis, 2023
- The Framework of Metaverse for Systems Engineering, 2022
- Signal Processing for Brain and Heart (EEG and EKG) by MATLAB, 2021
- Artificial Intelligence-Based Fitness Tracker for Physically Challenged People, 2021
- WFFSBD - A Novel Algorithm for Heterogeneous Traffic Accident Data Analysis, 2021
- The motion of the Robot by working with the Humanoid Robot NAO, 2020
- Study on the City Price Measurement Framework Based on Big Data, 2020
- Deep Learning Inference with Azure ML Studio, 2020
- IoT and WSN Solutions in Smart Environmental Monitoring, 2019
- Techniques for Multi-Omics Data Incorporating Machine Learning and System Genomics, 2019
- Logistic Regression with Python and NumPy, 2019

- Modeling Bank Customers' Behavior Using Transfer of Knowledge from Machine Learning, 2018
- Six-Wheeled Wireless Bomb Defusal Rover, 2018
- Automatic Detection of Pressure Distortion and Alarm System of Endotracheal Tube, 2018
- Health Guardian - A Subsidiary Android Application for Maintaining Sound Health, 2017
- Design and Development of a Low-Cost Pressure and Touch-based Matrix Sensor System, 2017
- Doctor Who? - A Customizable Android Application for Integrated Health Care, 2017
- An Android Application for University-Based Academic Solution, 2016
- Pre-Processing Data in Weather Monitoring Application by Using Big Data Quality Framework, 2016
- Improvement of verbal and non-verbal communication skills of ASD patients by robot interaction, 2016

Course Taught at University

Undergraduate

- EEE 435 – Robotics
- EEE 469 – Advanced Robotics
- EEE 461 – Artificial Intelligence
- EEE 490 – Object–Oriented Programming – Java & Python
- EEE 416 – Microwave Engineering
- ETE 335 – Wireless Communications
- EEE 314 – Numerical Technique (MATLAB)
- EEE 323 – Microprocessor
- EEE 497 – Biomedical Engineering
- EEE 498 – Machine Learning
- EEE 499 – Senior Project and Industrial Internship

Certifications

- MBSE – Systems Engineering
- Product Development & Systems Eng.
- Numerical Techniques – MATLAB
- Object-oriented Programming – Java
- Machine Learning - Python
- AutoCAD – 2D and 3D Modelling
- Yaskawa – Motoman YRC1000 Robots

- Certified – Process Design
- Certified – Power BI Service
- Certified Risk Management FMEA ISO 31000
- Six Sigma – White, Yellow, Green, and Black Belt
- OSHA 10 – Click Safety – Accredited IACET Provider

Skills

- | | |
|---|---|
| • Model-Based Systems Engineering | • Object-Oriented Prog. – Python & Java |
| • Data and Systems Architecture | • Risk Analysis – FTA, CLD & FMEA |
| • Unified Modeling Language – UML | • Systems Modeling Language: SysML |
| • System Design – Astah & Cameo | • Computer-Aided Design: CAD |
| • Human-Machine Interface: HMI | • PLC - Ladder Logic |
| • System-level design & integration | • Machine Learning Algorithm – Python |
| • Critical Thinking – Systems Engineering | • Autodesk Inventor – Autodesk |
| • Autonomous Mobile Robots | • Yaskawa Robotic Arm |

Professional & Volunteering Activities

- **Reviewer** - IEEE ICVR 2025 (11th IEEE International Conference on Virtual Reality)
- **Reviewer** - IEEE ICALT 2025 (25th IEEE International Conference on Advanced Learning Technologies)
- **Reviewer** - IEEE Access 2024, IEEE Access 2023, IEEE Access 2021, IEEE Access 2019
- **Faculty Advisor** - IUB IEEE RAS (Robotics and Automation Society) 2019
- **Hospitality Chair** - 5th International Conference on Advances in Electrical Engineering (ICAEE) 2019
- **Reviewer, Robotics and Biomedical Section** - 5th International Conference on Advances in Electrical Engineering (ICAEE) - IEEE Conference 2018
- **Judge** - Robotics section of 2nd Technovation 2018 - Bangladesh
- **Reviewer** - Biomedical and Artificial Section - 4th International Conference on Electrical Engineering and Information & Communication Technology (iCEEiCT 2018) – IEEE conference
- **Reviewer** - 4th International Conference on Advances in Electrical Engineering (ICAEE 2017 and ICAEE 2019) - IEEE Conference
- **Student Mentor** - Sheffield Hallam University, United Kingdom 2013-2014
- **Student Ambassador** - Sheffield Hallam University, United Kingdom 2011-2012
- **Facility Staff** - Sheffield Hallam University, United Kingdom 2011-2012
- **Course Representative** - Sheffield Hallam University, United Kingdom 2010 - 2011