

# Muhammad Danish Saleem

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## Personal Details

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## Qualification

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### Ph.D. in Industrial & Manufacturing Engineering (In Progress)

NED University of Engineering and Technology

Cumulative GPA: 3.93 / 4.00

### Masters in Mechanical Engineering

NED University of Engineering and Technology

Cumulative GPA: 3.54 / 4.00

### Bachelors in Industrial and Manufacturing Engineering

NED University of Engineering and Technology

Cumulative GPA: 3.54 / 4.00

## Career & Experience

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### Lecturer in the Department of Industrial and Manufacturing Engineering at NED University of Engineering and Technology, Karachi since 2023 to date

- Teaching undergraduate courses from first to final year
- Member, Departmental OBE Committee (DOBEC), contributing to the successful implementation of Outcome-Based Education (OBE) in compliance with PEC accreditation requirements
- Supervising undergraduate Final Year Design Projects
- Preparing and maintaining documentation related to the departmental OBE Cell
- Contributing to curriculum development and enhancement in alignment with industry trends and ECRDC guidelines
- Managing and overseeing industrial and research projects, providing academic and technical guidance to ensure successful completion
- Reviewer, 14<sup>th</sup> and 15<sup>th</sup> International Mechanical Engineering Conference
- Conducted training: “Embracing Industry 4.0: Transforming the Future of Manufacturing” through the platform of the Society of Manufacturing Engineers (SME)
- Assisted in Training on Arduino

### Teaching Assistant in the Department of Industrial and Manufacturing Engineering at NED University of Engineering and Technology, Karachi from 2022 to 2023

- Deliver lectures and laboratory sessions for undergraduate courses, including Health, Safety & Environment, Finite Element Analysis, and Metrology & Quality Control

- Support students in technical understanding, skill development, and application of course concepts
- Provide timely feedback on assignments, tests, and practical work to facilitate student learning
- Conduct demonstrations and practical exercises, advising on methods, techniques, and required skills
- Participate in assessment activities, including marking, invigilation, and grading
- Contribute to the development, updating, and documentation of course materials and curriculum
- Conduct laboratory research and review relevant academic literature to support teaching and departmental projects

#### **Assistant Manager (Production Division) at Pak Suzuki Motors Company Limited**

- Analyze and forecast shop data to support achievement of monthly and annual production targets
- Monitor departmental KPIs and resolve critical issues related to Safety, Quality, Productivity, and Cost
- Identify process weaknesses, investigate defects, and implement corrective and preventive measures
- Interpret and analyze monthly and yearly quality and production data
- Ensure compliance with standard operating procedures and implement health & safety standards
- Support production process activities and oversee ERP (LX) and parts rejection management systems
- Conduct continuous improvement initiatives, including Kaizen and 5S activities, to optimize efficiency and reduce waste
- Develop action plans and departmental budget proposals to support operational goals

#### **SAP Stream Champion (Production Planning Module) at Pak Suzuki Motors Company Limited from 2020 to 2022**

- Led PP module implementation in SAP S/4 HANA for both global and local Suzuki operations
- Prepared SAP master data at the departmental level to support successful module deployment
- Conducted simulations and staff training sessions, focusing on SAP implementation and management policies

#### **Integrated Management System (IMS) Coordinator at Pak Suzuki Motors Company Limited**

- Coordinated IMS activities for the Motorcycle Division, ensuring compliance with internal and external standards
- Prepared, updated, and maintained IMS documentation, including SOPs, POS, OPS, and shop floor datasheets
- Participated in IMS audits, quality webinars, and hearings, providing necessary data and reports
- Supported continuous improvement initiatives through IMS-related activities and process standardization

#### **Management Trainee at Pak Suzuki Motors Company Limited**

- Completed brief OJT (On Job Training) across all sections of the Production Division to gain hands-on operational experience
- Attended training programs on 5S techniques, Kaizen, Safety, and Integrated Management System (IMS)
- Prepared daily reports and presented weekly progress updates to supervisors

## **Engineering Intern in Production & Mechanical Maintenance Department at Amreli Steels Limited**

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- Gained hands-on technical experience in steel bar manufacturing, developing an understanding of the complete production processes and plant operations
- Enhanced personal effectiveness and professional skills within a corporate environment
- Prepared and submitted brief reports summarizing observations and key learnings

## **Research Interests**

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- Industry 4.0/5.0
- Smart Manufacturing
- Human Factors Engineering
- Occupational Health and Safety
- Advanced Production Technologies
- Sustainable and Green Manufacturing

## **Research Publications**

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- **Muhammad Danish Saleem**, Muhammad Wasif and Anis Fatima, Engineering management: Impact of Industry 4.0 on sustainability. In Structural Engineering, Robotics and Mechatronics, Sustainable Power Supply (pp. 175). Trans Tech Publications. <https://doi.org/10.4028/b-aXCb1W>
- **Muhammad, D. S.**, Muhammad, W., & Anis, F. (2025). Impact of Industry 4.0 on Sustainability. Applied Mechanics and Materials, 929, 175–184. <https://doi.org/10.4028/p-eq3fhv>
- **Muhammad Danish Saleem** and Muhammad Wasif (2025), “Leveraging Machine Learning to enhance Supply Chain Agility and Strategic Operational Excellence”, International Conference on Digital Manufacturing, Pahang, Malaysia.
- Muhammad Mubashir Aftab, Anusha Ahmed, **Muhammad Danish Saleem** and Muhammad Wasif (2025), “Non-Contact Surface Roughness Measurement: Prototype Development and Testing”, International Conference on Digital Manufacturing, Pahang, Malaysia.
- **Muhammad Danish Saleem**, Muhammad Wasif and Anis Fatima (2025), “Impact of Industry 4.0 on Sustainability”, 14<sup>th</sup> International Mechanical Engineering Conference, Karachi, Pakistan.
- **Muhammad Danish Saleem**, Muhammad Mubashir Khan and Anis Fatima (2024), “IoT in Industry 4.0: Challenges and Opportunities”, 13<sup>th</sup> International Mechanical Engineering Conference, Karachi, Pakistan. **(Best Paper Award)**
- Anis Fatima, **Muhammad Danish Saleem** and Muhammad Wasif (2024), “On Optimization of Process Parameters of Inconel-718 Machining for Green Production”, AIP Conference Proceedings, Vol. 3125, Issue No. 1 doi: <https://doi.org/10.1063/5.0214431>
- Syed Rehan Ashraf, **Muhammad Danish Saleem**, Khalid Ijaz and Sadaf Sajjad (2024), “Sales forecasting using Sequential Long short-term memory (LSTM) Model”, IBA SBS 3rd International Conference, Karachi, Pakistan.
- Anis Fatima, **Muhammad Danish Saleem** and Asim Zaheer (2023), “On implementation of health and safety measures in re-beaming department of denim manufacturing – a case study”, Journal of Quality and System Engineering, Vol. 2, Issue No. 1-2, Page1-10.
- Anis Fatima, **Muhammad Danish Saleem** and Muhammad Wasif (2023), “On Optimization of Process Parameters of Inconel-718 Machining for Green Production”, 3<sup>rd</sup> International Conference on Key Enabling technologies, Istanbul, Turkey.

- **Muhammad Danish Saleem** and Nasiruddin Shaikh (2021), “Cycle time reduction of assembly line using value stream mapping”, Proceedings of the 10th International Mechanical Engineering Conference (IMEC), Karachi, Pakistan.

## Research and Industrial Projects

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Research Supervisors of the following research and industrial projects:

- Digital Twin Using Lathe Machine **[UNESCO Best FYP 2025]**
- Optimizing Supply Chain Efficiency using machine learning techniques **[UNESCO Best FYP 2025]**
- Enhancing Operational Performance and Productivity through Industry 4.0 enabled smart Manufacturing Technologies
- Design and prototyping of a 3D Surface profiling device using optical imaging **[UNESCO Best FYP 2025]**
- Design and development of Smart Factory Utilities dashboard that monitor consumption and predict outliers **[UNESCO Best FYP 2025]**
- Implementation of predictive quality analytics enhancing product quality in AGP limited
- Cost Optimization and Process Integration in FMCG
- An IoT based intelligent automated production line for smart manufacturing (won the **Best Poster Award** in the *13<sup>th</sup> International Mechanical Engineering Conference Poster Competition 2024*) **[UNESCO Best FYP 2024]**
- Smart Health and Safety Compliance System
- Optimizing Supply Chain Efficiency using Machine Learning techniques
- Digital Twin Using Lathe Machine.
- Enhancing Operational Performance and Productivity through Industry 4.0 enabled smart Manufacturing Technologies
- Design and Development of Smart Factory Utilities dashboard that monitor consumption and predict outliers
- Design and prototyping of a 3D Surface Profiling device using Optical Imaging
- Implementation of Predictive Quality Analytics enhancing product quality at AGP Limited
- Cost Optimization and Process Integration in FMCG
- Cost Reduction and Waste Minimization by using Lean Manufacturing

## Workshops/Trainings/Seminars/Certifications

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- Attended training on **Quality Management System: An in-depth Training**
- Attended **Faculty Development Training Programme (Technology Transformation Dissemination Sessions)** arranged by GetInnovative4Impact & co-funded by the European Union in collaboration with UET Taxila and International Project Partners
- Attended CPD training on **Project Management (From Planning to Performance: The Project Managers Toolkit)**
- Attended International Summit on **Redefining Digital Manufacturing: Concept to Product**
- Attended training on **HEC Cascade program: An Internationalization approach in Higher Education Academia & Assessment and Evaluation in Higher Education**
- Attended training on **Research Development Programme**
- Attended **Reciprocate Training Sessions** at Universiti Malaysia Pahang Al-Sultan Abdullah
- Attended training on **Process of Examination and Assessment/ Duties of Invigilator and Examiner**
- Attended training on **Using Generative Artificial Intelligence (AI) tools in office work**

- Attended **Faculty Development Training Programme (Technology Transformation Dissemination Sessions)** arranged by GetInnovative4impact & co-funded by the European Union
- Attended training on **Technology Integration in Higher Education Teaching** arranged by HEC-NAHE at Dow University of Health and Sciences
- Attended **Fire Safety Masterclass Training by FPAP**
- Attended Expert Panel discussion on **AI in Engineering Industry and Education**
- Attended training on **Outcome Based Education (OBE)**
- Attended training on **Process of Examination and Assessment**
- Attended workshop on **Course Design**
- Attended training on **Effective Workplace Communication: Principles & Practices**
- Attended training on **Teaching Case Studies**
- Attended training on **Time Management**
- Attended training on **Psychomotor and Affective Domain Evaluation & Assessment, CEP and CEA (OEL & PBL)**
- Attended webinar on **Chat GPT & Professional Integrity**
- Attended webinar on **Digital Transformation**
- Attended webinar on **Artificial Intelligence: Implications for Technologies & Business Strategy**
- Attended training on **ChatGPT for Effective Learning**
- Attended seminar on **Capacity Building Workshops for Research**
- Attended webinar on **Introduction to Industry 4.0 Technologies**
- Attended webinar on **Engineering Application of Agile Methodology**
- Attended webinar on **Risk Assessment and Management**
- Attended webinar on **Digital Transformation and Impact of IoT on Education, Industry, Health Sector and Society**
- Attended workshop on **Accelerate your research using Elsevier's Scopus**
- Attended workshop on **SAP S/4 HANA Implementation Framework**
- Attended certificate Course on **ERP Fundamentals with SAP**
- Attended certificate Course on **Supply Chain Management**
- Attended session on **Career Orientation by CISCO**
- Attended session on **OBE Training**
- Attended workshop on **Stress & Time Management**
- Attended workshop on **Maximizing Potential**
- Attended workshop on **Stay Well Training**
- Attended certificate Course on **Computer Software & Programming**

## **Software and Information Technology**

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- CAD Software: **TinkerCAD, AutoCAD, SOLID EDGE, Pro-Engineer and CATIA.**
- Simulation Software: **CISCO Packet Tracer, ANSYS, working knowledge of ICEM CFD, CFX, Fluent, and Open FOAM.**
- Statistical Analysis: **MINITAB.**
- Programming Languages: **Python, Google Colab, Turbo C++, MATLAB, GW BASIC and MS DOS.**
- Application Software: **Microsoft Power BI, MS Azure, IMB Watson, MS Office, MS Project, POM and TORA.**
- Graphics: **Adobe Photoshop and FreeHand.**
- Cloud based Applications: **Zoom, Google Classroom, Google Meet and ChatGPT.**

## Academic Research Projects

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- **Biogas Digester:** Construction of a biogas digester using organic waste of Cow Dung.
- **Power Hacksaw:** A prototype hacksaw model based on reciprocating mechanism.
- **Taper Shaft:** Manufacturing project manufactured on a lathe machine.
- **Dark Sensor:** Electronic project for sensing darkness and glow mechanism.
- **Concrete Mix Ratio:** Achieving best concrete mix ratio with compression & tensile tests.
- **Slider Crank:** CAD Model of slider crank on Pro-Engineer.
- **AGV:** Research based Assignment on Automated guided vehicles.
- **International Quality Standards:** Research based assignment on internationally recognized quality standards.

## Languages

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- English
- Urdu

## Memberships and Affiliations

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- Pakistan Engineering Council (PEC)
- Industrial Engineering & Operations Management (IEOM) International Society