

# Engr. Dua Nisar

Email: [duanisar@cloud.neduet.edu.pk](mailto:duanisar@cloud.neduet.edu.pk) | Phone No: +92-334-2809255 | LinkedIn: [www.linkedin.com/in/dua-nisar](https://www.linkedin.com/in/dua-nisar)

## EDUCATION

### NED UNIVERSITY OF ENGINEERING & TECHNOLOGY

Karachi, Pakistan

#### *MEM Masters of Engineering Management (Textile Management)*

Oct 2023 – June 2025

- CGPA: 3.65/4.00
- Thesis: Indigenous Development of High Performance Textile Based Composite Structural Reinforcement System for Civil Infrastructure.  
Summary: The research focused on material selection, textile architecture, composite fabrication, and structural performance evaluation to provide a cost-effective, durable, and locally adaptable alternative to conventional reinforcement systems.

#### *BE Textile Engineering*

Oct 2019 – 2023

- CGPA: 3.588 /4.00 (Secured 5<sup>th</sup> Position out of 75).
- Final Year Design Project: High Performance Textile based Composite for Civil Infrastructure.

## WORK EXPERIENCE

### NED UNIVERSITY OF ENGINEERING & TECHNOLOGY

Karachi, Pakistan

#### *Lecturer (Dept. of Textile Engineering)*

Dec 2025 - Present

- **Course:** Pre-treatment of Textiles (TE 205), Textile Testing 1 (TS 243), Textile and Environment (TE 318)
- Delivered lectures and supervised laboratory sessions for undergraduate textile courses.
- Developed course materials, lesson plans, and practical experiments aligned with program objectives.
- Designed and evaluated assessments, assignments, and examinations to measure student learning outcomes.
- Guided and mentored students in theoretical and practical aspects of textile pre-treatment, testing, and environmental impact.
- Ensured proper use of laboratory equipment and adherence to safety protocols.
- Integrated industry practices and sustainable approaches into course content.
- Contributed to departmental academic activities.

#### *Visiting Lecturer (Dept. of Textile Engineering)*

Aug 2025 - Dec 2025

- **Course:** IT Fundamentals and Application (MF 101), Mechanics of Materials (MM 205)
- Delivered lectures and conducted practical sessions for IT Fundamentals and Applications (MF 101) and Mechanics of Materials (MM 205).
- Designed and implemented course materials, lab exercises, and assessments to align with curriculum requirements.
- Facilitated student learning through interactive teaching methods and practical demonstrations.
- Evaluated student performance, provided feedback, and maintained academic records.

#### *Research Assistant*

Sept 2023 - Dec 2025

- Conduct in-depth analyses of existing literature, patents, and research to provide context and background for research topics addressed in technical reports.
- Design and execute experiments to evaluate the properties of textile-based composite materials, particularly for retrofitting applications.
- Perform statistical analysis using Tableau, Pandas, and MS Excel to interpret research data to support report conclusions and recommendations.
- Collaborate with research team members to gather data, validate findings, and refine report content.
- Maintained detailed documentation of research methodologies, data sources, and analytical techniques employed in report writing.
- Ensure the accuracy and integrity of technical reports through fact-checking and proofreading.
- Present research findings and technical reports to stakeholders, fostering understanding and dialogue on complex topics.

### **Capacity Development Project:**

- Worked as a Research Associate under the collaborative research project with the SM Denim Mills for the “Analytical Characterization and Performance Evaluation of CVC in Denim Yarn”.
- Worked as a Research Assistant under HEC funded project (11 Million) which aims to develop Pakistan’s first commercial grade technical textile based FRP composite system for strengthening of civil infrastructure. It is a 3 year targeted project to offer an economically viable solution for Pakistan’s Construction Industry.

### **Activities:**

- Organized a seminar titled "TexTexh Connect 2026: NED-ITB Research Collaboration", in collaboration with Institut Teknologi Bandung ITB, Indonesia.
- Successfully managed overall operations for the proposal of research grants of National Research Project for Universities – NRP, Pakistan Science Foundation - PSF research grant proposal and Sindh Research Support Programme (SRSP).
- Organized a national seminar titled "Enhancing Academic Excellence – Integrating Strategic Planning and Quality Assurance Framework for Institutional Growth", in collaboration with HEC Pakistan and Universiti Teknologi MARA, Malaysia.
- Represented NED University as part of the Communities of Practice (CoP) at events organized by GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit).
- Participated in the RBH Due Diligence Workshop, organized by GIZ on behalf of the Federal Ministry for Economic Cooperation and Development and RBH Network.
- Contributed as a core research analyst in the project proposal development team for the Export Development Fund, Ministry of Commerce, and Pakistan.

### **FYDP 2024 onwards:**

Served as project technical advisor for the following FYDPs,

- Development of High Performance Technical Textile by Utilizing Dyneema for Retrofitting Application.
- Development of High Performance Technical Textile by Utilizing Taperan for Retrofitting Application.
- Strengthening of Reinforced Concrete Column under uniaxial Compression loading using Taperan FRP
- Strengthening of Reinforced Concrete Beam in shear using Taperan FRP
- Strengthening of Reinforced Concrete Beams in flexural using Taperan FRP.
- Behavior of structural concrete strengthened with Taperan FRP
- High Performance Textile Based Composites for Civil Applications.

### **GULAHMED TEXTILE MILLS LTD.**

**Karachi, Pakistan**  
Aug 2022 – Sept 2022

#### *Process Control Intern*

- Familiarized with Dye House Management Software (SedoMaster and LEIMS.i).
- Experience in applying FMEA (Failure Mode and Effects Analysis) to identify and mitigate process risks.
- Proficient in utilizing SCADA (Supervisory Control and Data Acquisition) systems and statistical process control (SPC) systems for data acquisition and monitoring.
- Skilled in data analysis using Tableau, Pandas, and MS Excel and control charting techniques for process improvement.

### **ARCHROMA PAKISTAN LTD.**

**Karachi, Pakistan**  
Apr 2022 – May 2022

#### *Production Analyst Intern*

- Experience in analyzing production flow and identifying bottlenecks to ensure seamless uninterrupted production process.
- Proficient in utilizing ERP systems for data extraction and analysis.
- Analyze and monitor production quality using SPC software.
- Investigate and identify the underlying causes of production problems mitigate using Lean Six Sigma to eliminate 10% of production waste.

## LUCKY TEXTILE MILL LTD.

Karachi, Pakistan  
Mar 2022 – Mar 2022

### *Process Engineering Intern*

- Experience in developing Batch Process Flow Diagrams (PFDs), SAM/SMV and Lean manufacturing industry approach for 'Zero Defect'.
- Manage pilot scale project for method study for line capacity improvement which increases the production by 15%.
- Skilled in applying material balances and process troubleshooting techniques.

## HONOR AND AWARD

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**HEC Scholarship 2020 & 2023** – Awarded by Higher Education Commission for academic merit.

**Indigenous Scholarship 2024** – Granted by Sindh HEC for MPhil/MS/PhD studies.

**Runner-Up, FYDP Exhibition** – Namal Tech Expo 2025 – Recognized for outstanding final year design project.

**Award of Participation** – TexTexh Connect 2026: NED-ITB Research Collaboration – Awarded by Team NRP-17074.

## CERTIFICATIONS

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|-------------------------------------------------------------------------------|------------|
| Data Visualization for Data analysis and Analytics - <b>LinkedIn Learning</b> | April 2024 |
| Data Analysis with Python - <b>LinkedIn Learning</b>                          | Jan 2022   |
| SMARTEX Geo Textile course certificate - <b>SMARTEX</b>                       | Mar 2022   |

## ADDITIONAL INFORMATION

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**TECHNICAL SKILLS:** MS Office, Google Sheets, Python, Pandas, Adobe Illustrator, MadCap Flare, Tableau, SPC software, Jira.

**SOFT SKILLS:** Technical writing, Communication, Presentation, Team work, Problem-solving, Critical thinking, Analytical thinking.

**LANGUAGES:** English and Urdu (Native).

*References can be submitted on request.*