

# Hadia Fakhar

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Product Design | Procurement | Mechanical Testing | Capacity Planning | Six sigma foundations | Statistical Analysis  
Process Improvement | Production Process | Process Control | Root Cause Analysis | Project Management

## Material / Process / Quality / Manufacturing Engineering

### Education:

- **California State University East Bay, Hayward, CA:** Master of Science in Engineering Management | GPA: 3.59 May 2024
- **Institute of space technology University (IST), Pakistan:** Bachelor in Material Science & Engineering | GPA: 3.21 Aug 2021

### Certifications:

- Project Management Simplified Certification - National Association of State Boards of Accountancy (NASBA) March 2023

## Work Experience

### Materials Science Engineer | National Center of Physics, Pakistan

Jan 2021 – Mar 2022

- Partnered with the National Center of Physics for my Bachelor Thesis Project, successfully fabricating a prototype of Nb2O5/ITO electrochromic films for smart window applications.
- Utilized UV-Vis spectroscopy to measure transmittance, achieving 91% in the visible range for as-deposited films and increasing to 93% with the ITO layer.
- Employed XRD, UV-Vis spectroscopy, RBS, and surface resistivity measurements for thorough characterization of the coatings.
- Analyzed and interpreted XRD reports on daily basis, contributing to the understanding of material structures and properties of various metals, polymers, and composites.
- Worked closely with multidisciplinary teams in conducting various materials testing procedures, including ultrasonic testing, hardness testing, and tensile strength testing, enhancing the reliability and performance of materials.
- Prepared detailed reports on experimental procedures, findings, and recommendations, facilitating knowledge transfer and future research efforts.

### Material Failure Analyst Assistant | Failure Analysis Center IST

Mar 2020 – Dec 2021

- Assisted faculty in the examination and testing of metal parts and components to determine the root causes of failures using advanced material analysis techniques.
- Worked closely with faculty, PhD/MS scholars, and industry partners to provide material-related solutions and advisory services.
- Conducted various material testing procedures, and metallographic analysis, contributing to comprehensive failure reports.
- Prepared detailed reports on failure analysis findings, recommendations for corrective actions, and guidelines for avoiding similar failures in the future.

### General Fabrication Intern | Precision Engineering Services, Pakistan

May 2019 – Aug 2019

- Spearheaded design engineering analysis efforts, conducting comprehensive root cause analyses and implementing effective corrective actions, thereby significantly enhancing product reliability, and ensuring heightened customer satisfaction.
- Utilized problem-solving methodologies like 8D & RCA to address and resolve defects, leading to a 15% reduction in defective products and improved overall quality and efficiency.
- Oversaw manufacturing processes, identifying, and executing opportunities for continuous improvement, which contributed to a 10% increase in operational efficiency and supported business growth initiatives.

## Leadership Experience

### SCAA Peer Leader | Student center of Academic Achievement, Hayward, CA

Aug 2023 – May 2024

- Led marketing outreach initiatives, successfully increasing student awareness and utilization of SCAA services by 30-40%.
- Safeguarded confidential student data, ensuring full compliance with university policies and regulations.
- Utilized Excel and university's website Bay Advisor for streamlined appointment scheduling.
- Engaged and communicated with groups of students, effectively explaining SCAA services and resources, and encouraging their active participation.

## Projects

### Integrating AI powered chatbot with predictive inventory management and demand forecasting

Jan 2024-May 2024

- Developed and integrated an AI-powered chatbot with predictive inventory management and demand forecasting capabilities, leveraging Python, MySQL libraries, and a regression linear model for accurate future sales prediction, thus optimizing inventory management processes and enhancing operational efficiency.

### Fabrication of Nb2O5/ITO electrochromic films for smart window application (Thesis Project)

#### Institute of space technology, Pakistan

- Successfully employed e-beam deposition to coat a 200nm thick Nb2O5 layer on glass and utilized XRD characterization method, Rutherford and UV-Vis spectroscopy to achieve optimal results.

## Skills

- MS PowerPoint, Advanced MS Excel, MS Project, SharePoint, CATIA, Minitab, MATLAB, Engineering Design, Power Tool handling, Simulations,

Python, SQL, Pro Model Simulation, QM forecasting, Manufacturing Techniques, Lean Six Sigma Tools: FMEA, VSM, Lean Push/Pull method, Pareto Charts, 5S, DMAIC, Root Cause Analysis, Failure Model and Effects Analysis (FMEA), CAD/CAM, Statistical Analysis, Supply Chain Management, Project Management, Quality Assurance, Supply Chain Management (Production Planning, Inventory Control, Packaging, logistics, financial planning/forecasting/asset management, Using ERP systems.), Cost & Risk Assessment.