MUHAMMAD WASEEM

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RESEARCH INTERESTS

Smart manufacturing; Modelling; Data analysis and optimization; Machine learning; System control.

EDUCATION

- **PhD. in Mechanical and Aerospace Engineering**   Jan_2022- Present
  University of Virginia, Charlottesville, USA
  Research Area: Smart Manufacturing Systems and Control
  Supervisor: Dr. Cindy Qing Chang

- **M.Sc. in Industrial Engineering**   2017- 2019
  University of Engineering & Technology Peshawar, Pakistan
  Specialization: Manufacturing Systems Engineering
  Total GPA: 4.0/4.0 (*Graduated with Distinction*)

- **BS in Industrial Engineering**   2013- 2017
  University of Engineering & Technology Peshawar, Pakistan
  Total GPA: 3.90/4.0 (*Gold Medalist*)

EXPERIENCE

- **Graduate Research Assistant-UVA**   Jan-2022 -- Present
  - Modelling and analyzing multiproduct flexible manufacturing systems
  - Controlling production systems based on Reinforcement and deep reinforcement learning

- **Instructor-Manufacturing lab UET-Peshawar**   Mar-2019 – Dec-2021
  - Demonstrated the lab activities and assisted senior faculty in research projects
  - Managed and supervised lab staff and undergrad students
  - Helped the department in initiating of outcome-based education (OBE) system
  - Helped in the installation of integrated factory system (IFS) at the automation and control lab
  - Enhanced the student's satisfaction by ensuring that the course is highly sought after by employers

- **Instructor-Mechanics lab** (National University of Sciences and Technology Pakistan)   Sep-2018 -- Mar-2019
  - Taught and demonstrated the lab activities
  - Briefed the international delegates
  - Arranged training and motivational sessions for the lab staff
  - Managed, supervised, and reported the third-party projects

- **Shift Engineer-DYNEA Pakistan Petrochemicals**   Sep-2017 -- Aug-2018
  - Supervised, managed and trained new workers on plant activities
  - Helped in the design and fabrication of Methanol storage tank
  - Designed a layout for installation of new Molding Compound Powder plant
  - Improved the production quantity by batch-time optimization
  - Eliminated unnecessary activities and reduced worker fatigue by analysis and modification of material handling equipment
  - Participated in the Research & Development

INTERNSHIPS

- **Engineering Intern-MOL Pakistan oil & Gas**   Summer 2016
  - Designed and developed material data flow (MDF) sheet for warehouse' data management
  - Understood the Corporate Services' activities
  - Visited and observed well-site exploration and extraction processes

- **Corporate Services Intern, East West Trading International (EWI), U.A.E**
  - Managed inventory at the warehouse   Summer 2014
  - Coordinated with suppliers, inspected the received orders and generated the reports

SOFTWARE SKILLS

- **Engineering:** PTC Creo, Solid-works, Ansys Workbench, Abaqus, Arena Simulation, Simio, AnyLogic
- **Programming:** MATLAB, Python
- **Others:** SPSS, Minitab, Microsoft Office, Microsoft Project