

Mohammad Zainullah Khan

khanm30@udayton.edu | www.zainullah.com | [linkedin.com/in/mohammad-zainullah-khan](https://www.linkedin.com/in/mohammad-zainullah-khan)
(937)-939-6025 | Dayton, Ohio

EDUCATION

University of Dayton <i>Masters in Mechanical Engineering</i>	Jan 2022 - Dec 2023 GPA: 4.00
Ghulam Ishaq Khan Institute of Engineering Sciences and Technology (GIKI) <i>Bachelors of Science in Mechanical Engineering — Top position out of 100 students</i>	2014 - 2018 GPA: 3.89

WORK EXPERIENCE

University of Dayton <i>Graduate Research Assistant</i>	Jan 2022 - Present <i>Dayton, OH</i>
<ul style="list-style-type: none">Working on multi-robot path planning for industrial applications (spray painting, object manipulation etc).Designing a SPS chain to allow singularity free actuation of any spatial mechanism.Designed a pneumatically controlled smart hose for use during subtractive manufacturing operations.	
United Energy Pakistan Limited (<i>formerly BP's operation in Pakistan</i>) <i>Operations Engineer</i>	Jul 2018 - Nov 2021 <i>Badin, Pakistan</i>
<ul style="list-style-type: none">Worked in maintenance (mechanical) department to plan, optimize, and execute machine maintenance with the objective of improving production efficiency.Carried out pre-commissioning activities, commissioning, troubleshooting and sound O&M of rotary equipment.Performed technical analysis of equipment to monitor machine health, for continuous improvement & reliability.	
Reckitt Benckiser <i>Intern, Supply Services</i>	Jul 2017 - Sep 2017 <i>Karachi, Pakistan</i>
<ul style="list-style-type: none">Optimized manufacturing lineup and embellishment process through automation.Led to savings of \$30,000/year on three power brands: Harpic, Dettol & Veet.	

ACADEMIC PROJECTS

White Board Drawing robot

Controlled using Arduino, it can draw images captured from webcam or uploaded to it on a whiteboard with two different markers. Makes use of image processing for converting images into line traces and PID control for DC motors.

Stewart Platform - Design, Analysis, Modeling and Simulation

Developed equations, performed inverse kinematics (in MATLAB), and simulated in Simscape. It was actuated using both joint motion (kinematic actuation) and force (dynamic) actuation, via feedback control using PID controller.

Cost-Effective 3D Scanning Solution for University Lab (Final Year Project)

A low-cost, portable scanner controlled using Raspberry Pi capable of high quality scans. Played a pivotal role in winning a grant of \$0.6 million from the government.

Dynamic control of 1 Degree of Freedom (DOF) free-to-pitch Tailplane

Capable of maintaining desired pitch angle in the presence of varying wind speeds. Robust system with low overshoots.

ACHIEVEMENTS & INVOLVEMENT

- 1st position holder (Gold Medalist) out of 100 students in faculty of mechanical engineering during undergrad.
- Winner of Reckitt Benckiser's nation-wide competition: League of Game Changers (\$4,500 prize winner).
- Event Coordinator, Design, Build and Fly Competition (DBFC).
- Technical Head, The American Institute of Aeronautics and Astronautics (AIAA)- GIKI Chapter.
- Event Coordinator, Muslim Student Association (MSA).
- Best Young Author Award at WRE 2020 for book chapter '3D Scanner'. ([Book link](#))

KEY SKILLS & COMPETENCIES

Software & Programming: MATLAB (Simulink, Simscape), CAD (SolidWorks, Creo), ANSYS Workbench (Static Structural), Microsoft Office (Word, PowerPoint, Power BI, certified in Excel), C/C++, Embedded C (Arduino), Python

Professional Membership: American Society of Mechanical Engineers (ASME)

Languages: English (Proficient), Urdu (Native), Hindi (Proficient)

Other stuff I do: My Youtube Channel- [Engineering Simplified](#) | My Blog- www.zainullah.com/blog