

AHMED Hassan Raja

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EDUCATION

Comsats University Islamabad, Wah Campus

Bachelor of Science in Mechanical Engineering

Wah, Pakistan

2019 – 2023

- CGPA: 3.32/4.0
- Relevant Coursework: Engineering statics, Fluid Mechanics, Thermodynamics, Heat and Mass Transfer, Mechanics of Machines, Machine Design, Mechanical Vibration, Cad/Cam.

PUNJAB GROUP OF COLLEGES, P.D KHAN

Intermediate in Pre-Engineering

Pind Dadan Khan, Pakistan

2017-2019

- Grade: B
- Relevant Coursework: Mathematics, Chemistry, Physics.

WORK EXPERIENCE

SCHLUMBERGER SEACO INC.

(Management Trainee Officer-wireline)

Islamabad, PK

December 2023–Present

Schlumberger NV, doing business as SLB, also known as Schlumberger Limited, is an American oilfield services company. As of 2022, it is both the world's largest offshore drilling company and the world's largest offshore drilling contractor by revenue. SCHLUMBERGER Seaco Inc. delivers cutting-edge oilfield services and technology, enhancing energy exploration and production in Pakistan

- **Safety Protocols & Procedures:** Acquired hands-on experience in handling Wireline Unit, Wireline Cable and Rig-up Equipment adhering to safety protocols and procedures essential for safe operations.
- **Wireline Operations:** Gained Insights about wireline services provided by Schlumberger Pakistan Islamabad Base. i.e., Production services & Evaluation services.
- **Maintenance:** Performed Fast inspection of Tools (FIT-1) & (FIT-2) before every job. Servicing of Wireline Equipment I.E; Dual Pack Off, BOP, WHE 10K PSI
- **Teamwork:** Assisted Field Engineers & Crew Chiefs in Wireline job preparation.
- **Inventory Control:** Managed and optimized the movement of wireline tools from base to field, resulting in a 15% reduction in transit time. Prepared and updated inventory records for Schlumberger Islamabad Base, ensuring 100% accuracy.
- **Trainings:** Enhanced technical proficiency by participating in training sessions by professionals and workshops offered by Schlumberger.
- **Report Submission:** Orchestrated the completion and submission of quarterly reports and a comprehensive report to Wireline Product Service Delivery Lead summarizing key insights from the session and outlining actionable recommendations for process optimization

MATCHLESS ENGINEERING (PVT) LTD

(Quality Inspector)

Lahore, PK

August 2023-December 2023

Matchless Engineering Pvt. Ltd. specializes in manufacturing high-quality diesel tractor parts, ensuring precision and durability in the agricultural sector.

- **Shop Floor Management:** Led a team of 14 workers across 19 machines, ensuring efficient production with lathe, shaper, duplex, rimming, and vertical drilling machines led to 15% increase in production.
- **Line Process Supervision:** Streamlined operations, identifying and addressing bottlenecks for enhanced efficiency.
- **Production Oversight:** Maintained quality and schedules, meeting targets and managing backup inventory.
- **Machinery Maintenance:** Optimized operational efficiency through regular maintenance and preventive strategies.
- **Production Control:** Directed daily activities, delivering demanded production weekly, and reporting performance.

ICI PAKISTAN LTD.

(Intern)

Khewra, PK

August 2022- September 2022

Lucky Core Industries Limited, formerly known as ICI Pakistan, is a Pakistani conglomerate company headquartered in Karachi. It manufactures polyester, pharmaceutical, agrochemical, soda ash, and veterinary medicine. During my 4-week internship at ICI Soda Ash Company in the mechanical workshop, I gained hands-on experience with workshop machines, compressors, pumps, and various mechanical components utilized in industrial settings.

- **Safety Measures & Guidelines:** Gained insights about safe work ethics and safety protocols i.e., Permit to work, scaffolding Permit.
- **Preventive and Routine Maintenance:** Developed a practical understanding of maintenance of pump & Compressors, including preventive and routine maintenance procedures.
- **Report Submission:** Submitted a 4-weeks comprehensive internship report covering all the skills and insights i gained at ICI Pakistan Ltd.

PUBLICATIONS

JOURNALS

1. Usman, Ali, Saad Arif, Ahmed Hassan Raja, Reijo Kouhia, Andreas Almqvist, and Marcus Liwicki. 2023. "Machine Learning Composite-Nanoparticle-Enriched Lubricant Oil Development for Improved Frictional Performance—An Experiment" *Lubricants* 11, no. 6: 254. <https://doi.org/10.3390/lubricants11060254>

ACADEMIC PROJECTS

➤ Development of Reciprocating Tribotester & Investigation of Nano-Particle-Based Improvement in Tribological Performance of Bio-Lubricants. (Final Year Design Project)

I led a team by designing and constructing the tribotester, conducting experiments, and analyzing the results, we aimed to contribute to the advancement of bio-lubrication technology and its applications in reducing friction and wear in mechanical systems.

- **Leadership:** successfully coordinated a team of four members, fostering collaboration, and ensuring the seamless execution of the project, resulting in its successful completion.
- **Teamwork:** Coordinating with a team of 4 members to carry out the project.
- **Effective Research Skills:** Studying various research papers and collecting verified data sample.

➤ Obstacle Avoidance Robot

March 2022-April 2022

An obstacle avoidance robot is designed to allow the robot to navigate in an unknown environment by avoiding collisions.

- Designed and built an autonomous robot capable of navigating and avoiding obstacles.

- Implemented obstacle detection and avoidance algorithms using sensors and actuators and coded them using Arduino Uno.

➤ **Designing of Glider**

April 2020-June 2020

A glider is a fixed-wing aircraft that is supported in flight by the dynamic reaction of the air against its lifting surface, and whose free flight does not depend on an engine.

- Utilized AutoCAD software to design and model a glider aircraft.
- Incorporated principles of aerodynamics and structural engineering to optimize the glider's performance.
- Created detailed 3D models and drawings, contributing to the successful construction of the glider.

➤ **Design And Manufacturing of Rc Plane**

December 2022 – March 2023

An RC plane, short for radio-controlled plane, is a model aircraft that is controlled remotely by a pilot on the ground using a handheld transmitter. These scaled-down replicas of real airplanes are powered by electric motors or internal combustion engines, allowing enthusiasts to enjoy the thrill of flying without leaving the ground.

- Utilized computer-aided design (CAD) software to create detailed 3D models of the aircraft components and employed engineering principles to ensure stability, control, and performance of the RC plane
- Selected appropriate materials for construction, considering weight, durability, and aerodynamic properties and fabricated and assembled the RC plane using various manufacturing techniques such as cutting, shaping, and joining components.
- Installed and calibrated electronic components including motors, servos, and receivers for remote control functionality and conducted thorough testing and fine-tuning of the RC plane to optimize flight performance and control.

➤ **Venturi meter**

March 2022-April 2022

Venturi meters are flow measurement instruments which use a converging section of pipe to give an increase in the flow velocity and a corresponding pressure drop from which the flowrate can be deduced.

- Designed and constructed the venturi meter apparatus, ensuring accuracy and reliability of measurements.
- Conducted experiments to evaluate the performance and efficiency of the venturi meter, analyzed experimental data and validated the functionality of the venturi meter.

EXTRACURRICULAR & PARTICIPATION

➤ **CERTIFICATE OF APPRECIATION FOR ORGANIZING ASME “MECH-FEST 2022”**

I took charge of planning and executing a diverse range of competitions. With my role spanning coordination and logistics, I successfully brought together engaging events like the 3D drawing competition, glider competition, and line tracking robot competition, offering students a platform to showcase their talents in the field of mechanical engineering.

➤ **BASICS OF AIR-CONDITIONING SYSTEMS & ENERGY SAVING**

February 2020

During this seminar I gained a comprehensive understanding of the key concepts and principles underlying air-conditioning systems. Additionally, I learned practical strategies and techniques for conserving energy, enabling me to make informed decisions to enhance efficiency and reduce environmental impact.

➤ **MANUFACTURING & TESTING OF COMPOSITE MATERIAL**

September 2019

During this seminar I gained valuable knowledge about the intricate processes involved in manufacturing composite materials. Additionally, I learned about advanced testing techniques used to evaluate the mechanical properties and performance of composite materials, equipping me with a deeper understanding of their applications and potential advantages in various industries.

SKILLS & COMPETENCIES

Design/Simulation: AutoCAD, Creo Parametric, Solid works, Ansys Workbench.

Programming Language: C++, Arduino.

Others: Microsoft Office, Illustrator, Photoshop, Premiere pro.

Ability to operate machine like

1. Lathe
2. Milling machine, Horizontal and Vertical
3. Shaper
4. Drilling
5. Spot welding
6. Automatic Hacksaw
7. 3D printers.

Language Proficiency: Punjabi (Mother Tongue), Urdu, English (Professional).

ACTIVITIES

- Currently conducting research on Tribological performance of bio lubricants and nanoparticles.
- Working on technical aspects of radio-controlled (RC) plane for optimised flight performance and control.

Extra-Curricular activities: Football, Snooker, 3D designing, full time hobbyist in research related work.

RECOMENDATION

Ali Ayub

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SLB

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