



Syed Hassan Ali Shah

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Gender: Male **Date of birth**: 08/02/2000 **Nationality**: Pakistani

ABOUT ME

To obtain a challenging position as a Mechanical Engineer where I can utilize my knowledge, experience, and creativity to contribute to the success of the organization.

EDUCATION AND TRAINING

[08/2019 - 06/2023]

Bachelors of Science in Mechanical Engineering

Ghulam Ishaq Khan Institute of Engineering Sciences and Technology <https://giki.edu.pk/>

Address: Tarbela Road, District Swabi, 23640, KPK, Pakistan

CGPA: 3.06/4.00

[2017 - 2019]

H.S.S.C. (Pre-Engineering)

Board of Intermediate And Secondary Education (KOHAT)

Address: KPK, Pakistan

Final grade: A1

Mathematics

Chemistry

Physics

[2015 - 2017]

S.S.C (Science)

Board of Secondary Education (KOHAT)

Address: KPK, Pakistan

Mathematics

Chemistry

Physics

PROJECTS

Design, fabrication, analysis and health assessment of hybrid laminated composite structures.

To make a hybrid laminated composite that has a greater economic impact and enhanced properties such as Tensile strength and Impact Strength with the guidance of Dr. Bilal and our main focus is on the health monitoring of hybrid laminated composite through Artificial Intelligence so that we can perform fault diagnosis and come to know about type, location and severity of fault and the expected life of composite, under the supervision of Dr. Asif Khan.

Campus Management System

CMS for students at Ghulam Ishaq Khan Institute was made using C++ as a tool.

Braiding Machine

A braiding machine design was proposed, the prototype was made on SOLID WORKS and designed calculations were made from Shigley Mechanical Engineering Design which was able to Braide thread of 3mm diameter, using different types of gears that were 3D printed.

Hybrid laminated composite

A hybrid laminated composite of carbon and kevlar fiber was designed and fabricated, then performed tensile and impact tests on coupons and compared the results were with the simulation performed on Ansys Mechanical APDL.

Bar Mechanism

5 bar mechanism was made using the knowledge of the Theory of Machines that could be used as a hammer to apply the impact load also its main purpose was for plantation in fields, after calculations model was made on SolidWorks and ADAMS.

Modeling And Pitch Control of A Two Degree-Of-Freedom Tailplane

Development of mathematical models to represent the dynamics of a tailplane. The objective is to control the pitch angle of the tailplane to maintain stability and improve flight performance. The tailplane has two degree-of-freedom, i.e. it can move in two directions (pitch and yaw). The mathematical models will take into account the aerodynamic and structural characteristics of the tailplane. Once the models were developed, a control algorithm was designed to control the pitch angle of the tailplane. The effectiveness of the control algorithm was evaluated through simulations.

Startup Idea for Service Business (Transport Company)

A startup idea was provided about opening a new Transport Company, demonstrating the sources of funding. Applying different techniques to check its validity such as Profitability Index, Net Present Value, Internal Rate of Return, and Payback Period.

INTERNSHIP

[18/07/2022 - 26/08/2022] **Former intern(Heavy industries Taxila Pakistan)**

Former intern at Heavy Industries Taxila and find the Ride Comfortability Index of AL-Khalid Tank using the standard of ISO 2631 and performed computational fluid dynamics of Hydraulic buffer.

HONOURS AND AWARDS

Captain, cricket team Awarding institution: Cadet College Kohat

Media Club President Awarding institution: Cadet College Kohat

Winner of Parliamentarian Debates Awarding institution: Cadet College Kohat

Discipline House captain Awarding institution: APSACS

LANGUAGE SKILLS

Mother tongue(s): Pushto

Other language(s):

English

LISTENING B2 **READING** B2 **WRITING** B2

SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

DIGITAL SKILLS

Machine learning | MATLAB | ANSYS | Solid Work | CREO | Microsoft Office | COMSOL MULTIPHYSICS | PYTHON