

# Sibghat Ullah Hamad

Kathiara, P/O Hajira, Tehsil Hajira, District Poonch, AJK  
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## EDUCATION

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**Ghulam Ishaq Khan Institute of Engineering Sciences and Technology (GIKI)** Topi, PK  
*Bachelor of Science in Electrical Engineering* August 2019 – May 2023

- CGPA: 2.99 / 4.00
- Relevant Coursework: Control Systems, Communication Systems, System Protection, High Voltage Engineering, Renewable Energy Systems, Artificial Intelligence, Supply Chain Management, TQM.

## WORK & LEADERSHIP EXPERIENCE

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**Civil Aviation Authority (Intern)** Islamabad, PK. June 2022 – August 2022

- Supported engineers and specialists at Airport and Engineering Complex during the 2-month period.
- Analyzed the 220kV Gas Insulated Grid Station at Islamabad International Airport.
- Designed Electric Motor Starters using Proteus software and Simulink.
- Learned about the power system protection scheme of the airport and suggested the improvement.
- Studied about the electrical transmission and distribution system of the airport.

**Team Urban GIKI** KPK, PK  
*Member at Team Urban GIKI* September 2019 – October 2020

- Worked on designing a fuel-efficient car to participate in Shell Eco Marathon.

## ACADEMIC PROJECTS

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**Portable Solar Power station with Integrated Battery management system and Load monitoring.**

- Designed a solar station that is plug and play and can be carried to remote/disaster effected areas where electricity is not available.
- Implemented P&O algorithm to design maximum power point tracking (MPPT).
- Implemented State of Charge (SOC) algorithm to design the battery management system.
- Designed a Buck Converter.

### Machine Learning Based Blink Detection System

- Implemented a MATLAB based Machine Learning model after 4% data filtration and normalization.
- Detected blinks of a subject through voltage fluctuations in an EEG dataset with a 96% accuracy.

### Line Tracking Robot.

- Programming using Arduino to generate a line tracking algorithm and circuit designing of Robot.

### Distribution Transformer Design and Implementation.

- Numerical analysis, circuit testing, and fabrication of a 75 kVA, 11kV to 220V distribution transformer for domestic usage.

## NOTABLE ACHIEVEMENTS

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### Topper of APS college Hajira in Intermediate.

- Scored highest Marks in Intermediate 1<sup>st</sup> part and 2<sup>nd</sup> part in whole college.

## SKILLS & COMPETENCIES

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**Programming Languages:** Python, C++, MATLAB.

**Design/Simulation:** LT-Spice, Proteus, Multisim, PSIM, LabView, COMSOL, Altium, AutoCAD, PTC CREO Parametric, PowerWorld Simulator, Microcontroller Interfacing: (PIC, Arduino), ETAP

**Others:** MS Office Applications (Excel, PowerPoint, Word), Adobe PremierPro, Photoshop

**Language Proficiency:** English, Urdu, Arabic (Basic).