Tanveer Ahmed

Nationality: Pakistani **Date of birth:** 01/01/2000 **Gender:** Male

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ABOUT ME

My research interests lie in soft robotics and flexible sensors. I mainly focus on the design, modelling, and fabrication of soft bioinspired robots and flexible sensors using state-of-the-art fabrication techniques. I have collaborated extensively on interdisciplinary projects across many fields, including environmental monitoring, wearable electronics, Power system, and healthcare applications. Furthermore, I enjoy teaching a wide variety of engineering subjects, such as electronic devices and circuit, fundamentals of robotics, linear circuit analysis at ERC (Engineering Resource Center) Sukkur IBA University.

EDUCATION AND TRAINING

BE Electrical Engineering (Power Systems)

Sukkur IBA University [08/2020 – 01/07/2024]

City: Sukkur | **Country:** Pakistan | **Thesis:** Thesis Topic: Design and Fabrication of Soft Prosthetic Hand using Embedded Sensors Advisor: Dr Afaque Manzoor Soomro

Higher Secondary Certificate (HSC)

Ever Shine Higher Secondary School [05/07/2015 – 08/06/2017]

City: Ranipur | **Country:** Pakistan

Secondary School Certificate (SSC)

High School Thari Mir Wah [14/07/2013 – 08/06/2015]

City: Thari Mir Wah | **Country:** Pakistan

PROJECTS

[08/2023 – 25/05/2024]

Final Year Project: Design and Fabrication of Soft Prosthetic Hand using Flexible Sensors

- The goal of the project is to design and fabricate a soft prosthetic hand with embedded custom-made flexible sensors. The proposed prosthetic will be comfortable, conformal and adaptive to subject's requirements. Furthermore, it targets those who have experienced paralysis attacks for the rehabilitation purpose, or elderly folks; It will enable those individuals improve their life style by performing routine tasks with ease and accuracy.

[01/2022 – 25/04/2022]

Maximum Power Point Tracking Solar Charge Controller (MPPT)

- I designed a Maximum Power Point Tracking (MPPT) solar charge controller to address the variability of solar panel output voltages caused by fluctuating sunlight intensity throughout the day. This variability, especially at midday when sunlight intensity peaks, can lead to voltages exceeding the rated capacity of standard 12-volt solar panels, reaching 14 or 15 volts. Connecting such panels directly to a 12-volt rated battery poses a hazard to the battery's longevity and performance. The MPPT solar charge controller efficiently manages and regulates the incoming solar power, ensuring optimal voltage levels for safe and efficient charging of the battery, thereby mitigating potential damage caused by voltage fluctuations.

Link: https://github.com/engrtanveerahmed/MPPT

Precision Stopwatch with Start and Reset Functionality

- I developed a precision stopwatch as a time-measuring device, designed to accurately measure time intervals between two points. The stopwatch features essential functions including a start button to initiate timing and a reset button to stop and restart timing from the initial point, ensuring precise and reliable time measurement for various applications.

Link: https://github.com/engrtanveerahmed/Digital-Stop-Watch-

DIGITAL SKILLS

AutoCad 2D -3D / EAGLE PCB desing / C,C++,Python,Arduino / LabView / NI myRIO / Matlab/Simulik / ANSYS Workbench (Simplified) / NI-MultiSim / Microsoft 365 / Solidworks software / ETAP power system analysis / PSSE Software / SCADA Automation / NI-ELVIS

HONOURS AND AWARDS

[01/2024] PEC

Pakistan Engineering Council (PEC) Award Funding for FYP Won this prestigious funding for my final year project, Design and Fabrication Soft Prosthetic Hand using Flexible Sensors **$ 500 funded by PEC**.

[07/12/2022] Institute of Electrical and Electronics Engineers

Free IEEE Membership

[08/2020] Govt. of Pakistan

Ehsas Scholarship for Bachelor's Degree Program

[03/2018] Govt. of Sindh

Cash Prize for extraordinary performance in Intermediate

CONFERENCES AND SEMINARS

[11/2022 – 11/2022] Sukkur IBA University

IEEE SCONEST-22

IEEE Region 10 Robo Compitition

WORK EXPERIENCE

Trainee Intern

Rouelite Techno Solar Company [06/2023 – 08/2023]

City: Sukkur | **Country:** Pakistan

- **Hands-On Solar Panel Installation:** Gained practical experience in installing solar panels on residential and commercial rooftops, including panel mounting, wiring, and troubleshooting.
- **Solar System Design:** Assisted in designing grid-tied and off-grid solar photovoltaic (PV) systems, including conducting site surveys, calculating system sizing, and optimizing layout for maximum efficiency.
- **Quality Assurance:** Participated in quality assurance checks for solar installations, ensuring compliance with industry standards, safety regulations, and manufacturer specifications.
- **Performance Monitoring:** Utilized monitoring tools to track and analyze solar system performance, identifying and resolving issues to maximize energy production and system reliability.

Director of Finance

Sindh Educational Organization (SEO) [08/2021 – 01/2024]

City: Sukkur | **Country:** Pakistan

- **Financial Strategy Development:** Spearheaded the development and implementation of financial strategies to support the educational upliftment initiatives in rural areas of Sindh, aligning financial goals with the organization's mission and vision.
- **Budget Management:** Managed and monitored the organization's budget, ensuring prudent financial allocation and utilization of resources to maximize impact and achieve educational objectives within budgetary constraints.
- **Fundraising and Grants Management:** Led fundraising efforts, including donor engagement, grant applications, and sponsorship opportunities, successfully securing funding to sustain and expand educational programs and projects.