



## **FINAL YEAR PROJECT REPORT**

# **ORIGAMI SOLAR PANEL WITH DUAL AXIS MAXIMUM SUNLIGHT TRACKING**

**In fulfillment of the requirement  
For degree of  
BEE (Electrical Engineering)**

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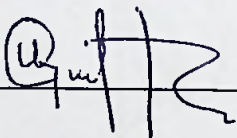
**BAHRIA UNIVERSITY (KARACHI CAMPUS)  
2018-2022**

**DECLARATION**

We hereby declare that this project report is based on my/our original work except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

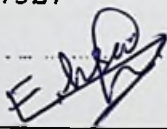
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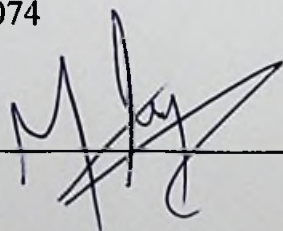
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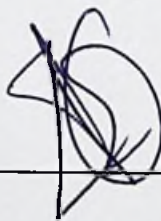
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**APPROVAL FOR SUBMISSION**

We certify that this project report entitled **“ORIGAMI SOLAR PANEL WITH DUAL AXIS MAXIMUM SUNLIGHT TRACKING”** was prepared by **USMAN GHANI, EHSAN AHMED, MUDASSIR HUSSAIN** has met the required standard for submission in partial fulfilment of the requirements for the award of Bachelor of **ELECTRICAL ENGINEERING** at Bahria University.

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## ACKNOWLEDGEMENTS

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## **ORIGAMI SOLAR PANEL WITH DUAL AXIS MAXIMUM SUNLIGHT TRACKING**

### **ABSTRACT**

Energy produce by non-renewable sources like fossil fuels are getting exhausted as humans moves ahead. World is shifting its production of energy towards renewable energy like solar, wind and others. Solar energy is one of the most effective resource in the South Asia. This report implement a design of foldable solar panel with dual axis in order to provide more efficiency. This design consist of two sections, one is hardware and other is software part. In hardware section, four light dependent resistors (LDR) are used to detect the sunlight. Three gear motors are used, two will handle x-axis and one will handle y-axis rotation. In software part, the code is written by using C programming language and is implemented on Arduino UNO controller. The model introduced in this report has been fully explained that how this system can maximize the efficiency of the energy conversion. That energy is then stored in battery. This product is able to light up to 3-Watt bulb and store energy for an hour or it can charge any smart phone for an hour. This product can be utilize in remote areas where there is no electric utility in future.

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