



Final Year Project Showcase for Batch-2016

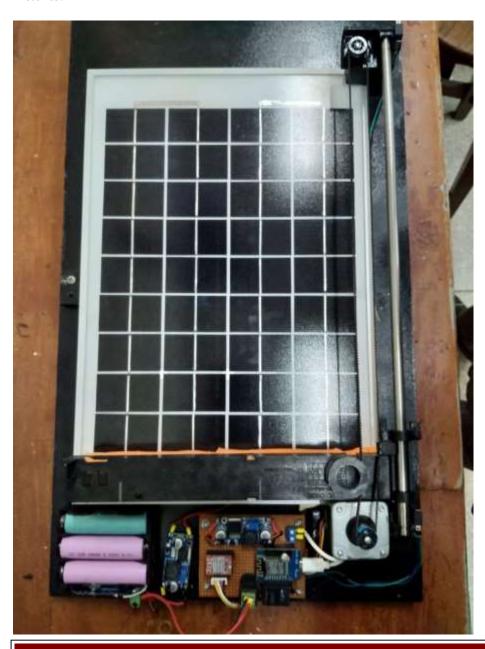
	Department of Physics		
	Applied Physics Programme		
		Soiling issue in Solar Panels and its Solution.	
1	Project Idea	Project Title: Automated Cleaning System of Solar Panel	
		by Using Microcontroller.	
		Automated cleaning of Solar panels on daily basis. The	
2	Process	developed system operates once in 24 hours and cleans	
4	Frocess	the solar panel. In this way soiling issue in solar panels	
		may be addressed to sustain the efficiency.	
	0-4	Automated cleaning of Solar panels on daily basis	
3	Outcome	maintains the efficiency of solar panels.	
4		In a study conducted by one of the FYP group of Batch	
		(2015-2016) in year 2019, it was reported that due to	
	E-:1(El4:1 D:-)	soiling issue, the efficiency of solar panel decreases by 7	
4	Evidences (Theoretical Basis)	to 10% in a period of two months. Therefore automated	
		cleaning of solar panels on daily basis sustains efficiency	
		of the solar panels.	
5	Competitive Advantage or Unique Selling Proposition (Cost Reduction, Process improvement,		
		velopment Goal), increase of market share or capturing new market or	
		etitor. In summary, any striking aspect of the project which compels Some detail description is required in terms of how, why when what.	
	You can select one or more from follows:		
		Automated cleaning of solar panels on daily basis	
		maintains efficiency of the solar panels. Cleaning of solar	
	Process Improvement which	panel installed on street light pole is a difficult and time	
	leads to superior product or	consuming task, so this method is useful in solar street	
	cost reduction, efficiency	lights.	
a	improvement of whole process	In a dusty environment, the soiling ratio is high and	
	(e.g. What is issue is current process	significantly affects the efficiency of solar panels.	
	and what improvement you suggests)	Particularly in solar street lights, where cleaning is a	
		tedious and time consuming task, the proposed solution	
		of automated cleaning is useful.	
	Expanding of Maybet share (There is no product available in the market related to	
b	Expanding of Market share (e.g. how it expand and what is problem	automate cleaning of solar panels. We need to introduce	
	with current market	the product in the market (manufacturers or companies of	
		solar street lights).	
c	Capture new market (e.g. Niche	We need to introduce the product in the market	
	market or unaddressed segment)	(manufacturers or companies of solar street lights).	
.1	Any Environmental Aspect	Automated cleaning of solar panels on daily basis	
d	(e.g. carbon reduction, energy efficient	sustains efficiency of the solar panels.	
	etc.) Target Market (Industries,	Users (Individuals, Municipal Corporations, Solar street	
6	Groups, Individuals, Families,	light manufacturers).	
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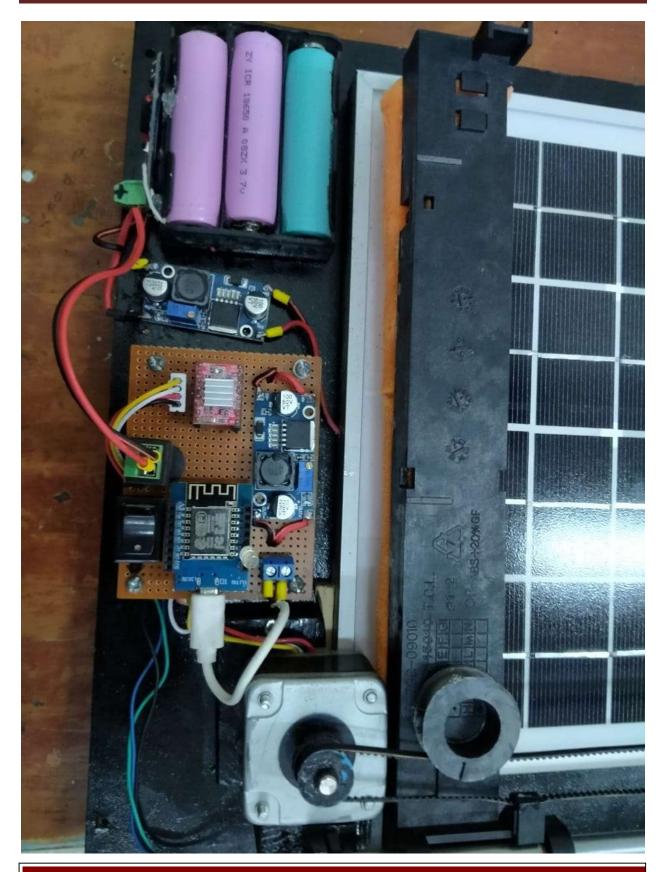
	Students, etc) Please provide some detail about user of the product, process or service	
7	Team Members (Names & Roll No.)	Taha Afzal (AP-076), Haseeb ur Rehman (AP-059), Muhammad Bilal (AP-77), Waseem Sajjad (AP-073)
8	Supervisor Name	Ghulam Mustafa (gmkhan@neduet.edu.pk) Osama Ayub (usamaayub@neduet.edu.pk)
9	Pictures	Attached
10	Video	Play Video

Pictures:









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