

Three Product Ideas

Name: Ayham Sabra

Course: EE585 (Senior Design I)

Instructors: Mr. Andy Stallard

Date: 8/26/21

Product Idea #1: Prayer rug with rakat counter

The problem many Muslims and I have is while we are praying, we sometimes forget what rakat we are on. This product will solve this problem by having a counter on a corner of the prayer rug. This will include sensors to detect when the person who is praying is going down and going up. I believe this product is viable because the main detection mechanism will just be based on the weight at the feet location. The counter will go up by one when the weight becomes 'high' (or the weight at the start of the prayer). When the person who is praying goes down the weight will go 'low' and then go back up, his weight will go 'high' and counter will go up by 1.

Product like this one has been created, but the only product that I could find that was purchasable was one that you would put next to a rug and is not built into the rug. I'd assume this is because most people pray on the mosques carpet, but ever since covid everyone would bring their own rug. Regardless, I found this product to be rather distracting and not very functional.

Product Idea #3: Car wind generator

The problem to be solved is capturing wasted energy from cars. The product will be wind turbines either on cars (I don't think this makes sense), side of the road, or under the road. This product seems viable because cars create wind, and nearby wind turbines can capture this energy.

I am not sure if this product is available anywhere. I have seen this idea on the internet whoever.

Product Idea #3: Roof water generator

The problem to be solved is capturing unused energy from rainfall on roofs. The product will be a generator using rainwater on a normal American house. The reason to believe this idea is viable is because to create electrical energy you need spin, and that can be created using a turbine. A small one will be used for this project; the main focus of this project is trying to make it as efficient and cheap as possible.

Products like this one have been created before but are not easily bought.