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**DEVELOPEMENT OF A CONVEYOR BELT FOR
WATER TRASH COLLECTOR**

DISSERTATION

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ABSTRACT

Studies have been conducted on how to grasp the pollution in river or lake. Rivers, lakes, and seas are well known for attracting places towards local people and tourist. Rivers, lakes, and seas are the resources of freshwater to human on their daily needs such as drinking, food resources and clean water. Water plays a major role in human daily life. Water pollution, plastic pollution and waste pollution tend to give lots of negative impact toward ecosystem. Human kept throwing waste and rubbish to rivers and seas instead of proper places. Due to these causes, the amount of freshwater decreased every year and aquatic nature been affected and die from poisons and toxics. There is a need for a water collector product that will help collect rubbish from river into rubbish bin. The objective of the project is to design and develop a conveyor belt for a water trash collector. The mechanism of conveyor belt is to transport, collect and gather rubbish to garbage bin and to clean the river from harming aquatic and human daily life. By creating an improved conveyor belt, it is easier and effectively collect the rubbish. Conveyor belt is made from plastics and metals and used DC motor to run the conveyor belt with 12 Volt lead-acid batteries. For the result, it will be expected to collect a lot of rubbish and clean the water in the river. In this point, people will ensure to get freshwater in much longer time and aquatic nature will be ensure from die by drastic pollution and extinction.

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INTRODUCTION

1.1 Background of Study

In our country Malaysia, that is known to people around the world for the sightseeing places especially rivers, lakes, and seas. A lot of people tend to visit these kinds of places to do some activities with friends and family such as swimming, picnic, or fishing. It became tourist's attractions. People now build stalls to sell foods and goods to the tourist that come to those places. However, there are a lot of trash and rubbish in the river due to act of selfishness among the tourists. This behavior effects the aquatic nature in the sea.

The river and lake in Malaysia are the source of freshwater to human for their daily use. It helps them to get clean water for drinking, and many more daily works. Water is important to our daily life and key to our survival. Water plays many important roles in the body including flushing waste from the body, regulating body temperature, transportation of nutrients and necessary for digestion. The water from river also important for generating food for economic supply and supporting freshwater ecosystems.

According to the Malaysian Environmental Quality Report 2016, out of 477 monitored rivers, only 47% of the rivers were classified as clean and the rest were slightly polluted (43%) and polluted (10%). Subsequently monitoring in 2017 until present, showed that the percentage of clean rivers was declining. Part of these pollution came from the trash made by human act during their visit to these places.

In this regard, water trash collector is made to collect the trash from the river so the river could be clean and decrease the pollution of water. Water trash collector moves along the river to collect the rubbish and develop lots of advantages for the ecosystem and community around it. It will help the aquatic nature by increasing the freshwater in the river, increase oxygen level in the river and decrease the pollution in the river.