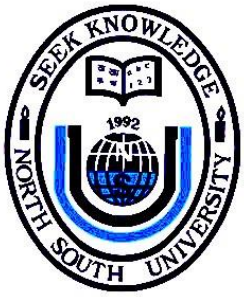
Department of Electrical and Computer Engineering
North South University



Senior Design Project

Large Scale Analysis and Classification of Potential Rooftop Mapping for the Installation Solar PV Using Multiple Platforms

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Spring, 2021

Declaration

This is to declare that no part of this report or the project has been previously submitted elsewhere for the fulfillment of any other degree or program. Proper acknowledgment has been provided for any material that has been taken from previously published sources in the bibliography section of this report.

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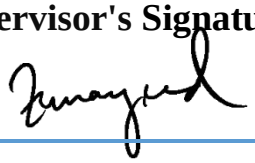
Approval

The Senior Design Project entitled "**Large Scale Analysis and Classification of Potential Rooftop Mapping for the Installation of Solar PV Using Multiple Platforms**" by Aahnaf Mustafiz (ID#1631698043), Taki Tazwar Ornob (ID#1620279042), and Ashrafoonnesa Irin (ID#1130004042) has been accepted as satisfactory and approved for partial fulfillment of the requirement of BS in CSE degree program on April 2021.

Supervisor's Signature



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Abstract

In this report, we present a feasible and substitute solution including conventional power supply from electricity grid through rooftop solar PV to overcome excessive electricity demand of Dhaka city. As we are facing appalling load-shedding day-to-day life because of the high demand of the civilians, our daily life is being affected negatively. So, we believe that we can tackle this massive problem by installing solar panels on our potential rooftop areas. Geographic Information System (GIS) can be an essential tool for the complete possible rooftop distribution mapping. In this project, our initial goal is to map available rooftops in Dhaka city and evaluate the possibility of producing electricity from the installations. We used ArcGIS software to compile and analyze geographic data for potential rooftop areas. After receiving data from software, we went for data mapping of the possible rooftop. And then, we measure the data of the rooftop. We also calculated the number of solar panels, and besides, we evaluated the amount and timetable of solar irradiation. And at last, we assessed the electricity amount from the respective solar panels. As it is a very effective and cheap way to produce electricity, we believe it will be able to decrease the pressure of electricity from the power grid and other power stations and also will be able to serve an enormous amount of people in our country.