Department of Electrical and Computer Engineering

North South University

Senior Design Project CSE 499

Flood Mapping using Remote Sensing

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DECLARATION

This is to declare that this report is a software-based implementation and is self-contained for the purpose of submission as a part of the Senior Design course in fall 2020 at North South University and has not been used elsewhere for any other reason. The materials that are obtained from other source are duly acknowledged in this project. Any similarities, in wording, if found to other papers, which has not been cited, is a subject of pure coincidence.

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Approval

The senior Design Project entitled "**Flood mapping using Remote Sensing**" by

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has fulfilled all the criteria required for the completion of Bachelors Of Science In Computer Science And Engineering program at NSU on January 2021.

Supervisor's Signature

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Acknowledgement

We would like to begin with our gratitude towards the Almighty by whose grace we have been able to complete this project during this difficult time of pandemic. We also like to acknowledge our gratitude to North South University's Department of Electrical Engineering and Computer Science for providing us with the platform to showcase our design capabilities, troubleshooting ability and implementation of theoretical knowledge fed to us through the core courses designed in the program and ultimately leading to the completion of senior design project.

Our most sincere gratefulness is to our project supervisor Dr. Shahnewaz Siddique, Assistant Professor for his relentless support and motivation throughout the project term for which we shall remain indebted forever. The completion of this project would have been implausible with his support and supervision. We would like to thank all remote sensing enthusiast who has been sharing their experiences and work methodologies on many platforms and implicitly helped us completing this project. Last, but not the least, we would like to thank our family members, friends, fellow classmates and all other personnel, to whom we might have caused any inconvenience to, during the project term, for their understanding and support.

Abstract

For the past few years flood has been a common natural disaster to Bangladesh. Every year it comes with tons of suffering for the riverine people and causes great harm of the economy of Bangladesh. Several researches and techniques has been used so far using remote sensing to identify natural disasters and map the affected area. The purpose of this study is to identify flood and landslide areas and to prepare the map using GIS software. We are going to work with several remote sensing data of different places which are affected by flood almost every year. We are going to discuss about the QGIS application and its SCP (Semi-Automatic Classification Plugin) and how it is effective to map a flooded area effectively with the help open source remotely sensed data.