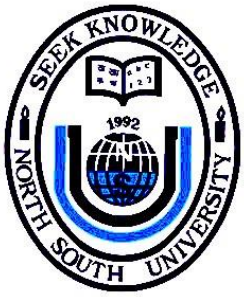
**Department of Electrical and Computer Engineering**
**North South University**




## Senior Design Project

# IOT based Garbage management system for Smart Cities

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**Summer, 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 acknowledgement 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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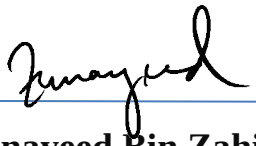
# Approval

The Senior Design Project entitled "**IOT based Garbage Management System for Smart Cities**" by Tashreef Jahan (ID#1712500643), Ahnaf Nurul Ahasan (ID#1711002043) and Rifatul Islam Rifat (ID#1712152643) has been accepted as satisfactory and approved for partial fulfillment of the requirement of BS in ECE degree program on 16 september, 2021.

**Supervisor's Signature**



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# Abstract

With the rapid increase of population and industrialization of nations, throughout the world, waste management has become a great concern for all of us. The improvement of the waste collection service in cities, generally the achievement of more efficient waste management is one of the main challenges that the cities face. Due to the lack of waste management, it creates unhygienic situation to the citizens. Nowadays, huge progress is shown in the field of information and communication technology. People's interest in using of electronic products such as computers and mobile devices are increasing. To avoid this waste management problem IOT based Smart Waste Management system is considered as a trending solution. Researchers also have introduced IoT based Smart waste management solutions and initiatives so that we can reduce the time and amount of energy required to provide the service, and also can reduce the waste generated. But the developing countries like Bangladesh, are not being able to apply the solutions due to many facts where socioeconomic environment is one of them. Many times, in our city we see that the garbage bins placed at public place is overloaded which creates an unhygienic environment. In this proposed system, a dustbin with embedded device will be made which helps in real time monitoring level of garbage in garbage bins. In this project, we will develop IoT based smart waste management system for developing countries like Bangladesh which ensures proper collection of waste, disposal and transportation with minimum amount of resources.