



Senior Design Project

COVID-19 related Research-paper Recommendation System using Graph-database (Neo4j)

Name	ID
Sabbir Alam	1711653642
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Faculty Advisor:

Dr. Mohammad Ashrafuzzaman Khan

Assistant Professor

Department of ECE

Summer 2021

LETTER OF TRANSMITTAL

September, 2021

To

Dr. Mohammad Rezaul Bari

Associate Professor and Chairman

Department of Electrical and Computer Engineering

North South University, Dhaka.

Subject: Submission of Capstone Project on “COVID-19 related Research-paper Recommendation System using Graph-database (Neo4j)”.

Dear Sir,

With due respect, we would like to submit our **Capstone Project Report** on “COVID-19 related Research-paper Recommendation System using Graph-database (Neo4j)” as a part of our BSc program. The report is about building recommendation system from graph database using neo4j. It can assist the medical researcher in finding the suitable information. We tried our level best to make the report meaningful and informative.

The Capstone project was very much valuable to us as it helped us to gain experience from practical field. It was a great learning experience for us. We tried to the maximum competence to meet all the dimensions required from this report.

We will be highly obliged if you are kind enough to receive this report and provide your valuable judgment. It would be our immense pleasure if you find this report useful and informative to have an apparent perspective on the issue.

Sincerely Yours,

1. Tawhid Ahmed Chetan

Department of ECE

North South University, Bangladesh

2. Sabbir Alam

Department of ECE

North South University, Bangladesh

APPROVAL

The capstone project entitled “COVID-19 related Research-paper Recommendation System using Graph-database (Neo4j)” by Sabbir Alam (ID: 1711653642) and Tawhid Ahmed Chetan (ID: 1711654642), is approved in partial fulfillment of the requirement of the Degree of Bachelor of Science in Computer Science and Engineering on September, 2021 and has been accepted as satisfactory.

Supervisor:

Dr. Mohammad Ashrafuzzaman Khan

Assistant Professor

Department of Electrical and Computer Engineering

North South University

Dhaka, Bangladesh.

Department Chair:

Dr. Mohammad Rezaul Bari

Associate Professor & Chairman

Department of Electrical and Computer Engineering

North South University

Dhaka, Bangladesh.

DECLARATION

This is our truthful declaration that the “**Capstone Project Report**” we have prepared is not a copy of any “**Capstone Project Report**” previously made by any other team. We also express our honest confirmation in support of the fact that the said “**Capstone Project Report**” has neither been used before to fulfill any other course related purpose nor it will be submitted to any other team or authority in future.

Tawhid Ahmed Chetan

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ACKNOWLEDGEMENT

First and foremost, praises and thanks to the God, the Almighty, for His showers of blessings throughout our work to complete the project successfully.

I would like to express my deep and sincere gratitude to my research supervisor, Dr. Mohammad Ashrafuzzaman Khan, for giving us the opportunity to do this capstone project and providing invaluable guidance throughout this period. His dynamism, vision, sincerity and motivation have deeply inspired us. He has taught me the methodology to carry out the project and to present the related works as clearly as possible. It was a great privilege and honor to work and study under his guidance. We are extremely grateful for what he has offered me. I would also like to thank him for his friendship, empathy, and great sense of humor.

We are extremely grateful to my parents for their love, prayers, caring and sacrifices for educating and preparing us for our future. We also would like to thank the Electrical and Computer Engineering department of North South University..

Finally, our thanks go to all the people who have supported us to complete the research work directly or indirectly.

Tawhid Ahmed Chetan

&

Sabbir Alam

ABSTRACT

COVID-19 is the infectious disease caused by the most recently discovered corona virus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019. Covid-19 pandemic is resulting high fatality rates globally, so knowing about it became vital. Until vaccines are available following prevention methods and taking necessary steps is the only way. It affects people in many ways and the symptoms also are not clear. Sometimes fever, body ache, dry cough, tiredness are the symptoms seen. It mainly causes problems in our lungs. In this project, we will develop a graph database from a large scientific literature to find the different aspect of covid-19 like transmission, risk factors, drug types and genome research related to corona virus. We will add recommendation system to the database by which one get research paper recommendation which will be helpful for the further researcher as they will get recommendation according to their interest.