

# **CVR: An Automated CV Recommender System using Machine Learning Techniques**



DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING  
NORTH SOUTH UNIVERSITY  
SPRING 2022

*CSE499 report submitted in partial fulfillment of the requirements for the degree  
of*

Bachelor of Science in Computer Science and Engineering

by

**Jannatul Ferdaous — 1731733042**

**Kanij Tamema Jahan Tama — 1811502042**

**Md. Mahir Absar Bin Mohsin — 1812777042**

**S. M. Shahriar Ferdous Shovon — 1812758042**

Under the supervision of

**Dr. Sifat Momen**

**Associate Professor**

Department of Electrical & Computer Engineering

North South University

Dhaka, Bangladesh

# DECLARATION

This report is prepared for CSE499A and CSE499B, a two-semester senior design course. This is to certify that this project is our original work. No part of this work has been submitted elsewhere partially or fully for any other degree or diploma award. Any material reproduced in this project has been appropriately acknowledged. We respectfully urge that you accept this report as partial fulfillment of the requirements for a Bachelor of Science degree from North South University's Electrical and Computer Engineering Department.

Students' Names and Signatures:

---

Jannatul Ferdous

---

Kanij Tamema Jahan Tama

---

Md. Mahir Bin Absar Mohsin

---

S. M. Shahriar Ferdous Shovon

# APPROVAL

We, Jannatul Ferdaous (NSU ID: 173 1733 042), Kanij Tamema Jahan Tama (NSU ID: 181 1502 042), S. M. Shahriar Ferdous Shovon (NSU ID: 181 2758 042), and Md. Mahir Bin Absar Mohsin (NSU ID: 181 2777 042) members of CSE499A and CSE499B under the Department of Electrical and Computer Engineering of North South University, have worked on the project titled “CVR: An Automated CV Recommender System using Machine Learning Techniques” under the supervision of Dr. Sifat Momen as partial fulfillment of the requirement for the degree of Bachelors of Science in Engineering.

---

Dr. Sifat Momen  
Associate Professor  
Department of Electrical & Computer Engineering  
North South University

---

Dr. Mohammad Rezaul Bari  
Associate Professor & Chair  
Department of Electrical & Computer Engineering  
North South University

# ACKNOWLEDGMENTS

By the mercy of the Almighty, we have started our senior design project entitled “CVR: An Automated CV Recommender System using Machine Learning Techniques”.

- Foremost, we would like to express our sincere gratitude to our advisor Dr. Sifat Momen for his continuous support in our project progress throughout CSE499A and CSE499B, for his patience, motivation, enthusiasm, and immense knowledge. His guidance helped us in all the research, writing, and implementation of this project.
- Our sincere thanks also go to North South University, Dhaka, Bangladesh, for providing an opportunity in our curriculum that enabled us to have an industrial-level experience as part of our academics.

# ABSTRACT

In the recruitment process, hand-picking the right candidate out of a pool of resumes in the allotted time can be quite daunting. Besides, there is always a risk of overlooking important information as there exists no specific format for writing CVs. This project focuses on extracting important information from CVs and job descriptions of various formats, using several machine learning techniques. Following this, the content-based recommendation technique is used to recommend candidates based on skillset. Currently, our work is limited to the computer science domain, with the expectation of expanding this to other fields in the future.