



Shaheed Benazir Bhutto University, Shaheed Benazirabad

Department of Computer Science

## Performa for FYP Topic & Supervisor Approval

Group No. \_\_\_\_\_

Batch: \_\_\_\_\_

| Group Member Roll No.                                |  | Title of the Final Year Project                                                                                                                                                                                                                                                                                                               |  |     |   |                                                             |  | SDGs by 2030                                                                                                                                                                                                     |  |
|------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----|---|-------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1.                                                   |  | Machine Learning based intrusion detection system                                                                                                                                                                                                                                                                                             |  |     |   |                                                             |  |  <p>Please check the information of SDGs on <a href="https://pakistan.un.org/en/sdgs">https://pakistan.un.org/en/sdgs</a></p> |  |
| 2.                                                   |  |                                                                                                                                                                                                                                                                                                                                               |  |     |   |                                                             |  |                                                                                                                                                                                                                  |  |
| 3.                                                   |  |                                                                                                                                                                                                                                                                                                                                               |  |     |   |                                                             |  |                                                                                                                                                                                                                  |  |
| <b>Target SDGs</b><br>(√)<br><br>Min 1-2 SDGs        |  | 1.                                                                                                                                                                                                                                                                                                                                            |  | 7.  | √ | 13.                                                         |  |                                                                                                                                                                                                                  |  |
|                                                      |  | 2.                                                                                                                                                                                                                                                                                                                                            |  | 8.  |   | 14.                                                         |  |                                                                                                                                                                                                                  |  |
|                                                      |  | 3.                                                                                                                                                                                                                                                                                                                                            |  | 9.  |   | 15.                                                         |  |                                                                                                                                                                                                                  |  |
|                                                      |  | 4.                                                                                                                                                                                                                                                                                                                                            |  | 10. |   | 16.                                                         |  |                                                                                                                                                                                                                  |  |
|                                                      |  | 5.                                                                                                                                                                                                                                                                                                                                            |  | 11. | √ | 17.                                                         |  |                                                                                                                                                                                                                  |  |
|                                                      |  | 6.                                                                                                                                                                                                                                                                                                                                            |  | 12. |   |                                                             |  |                                                                                                                                                                                                                  |  |
|                                                      |  |                                                                                                                                                                                                                                                                                                                                               |  |     |   |                                                             |  |                                                                                                                                                                                                                  |  |
| <b>Description of SDG</b>                            |  | To implement a Machine learning based intrusion detection system, compare different machine learning models on KDD cup and NSL KDD dataset, aligning with SDGs 7, and 11.                                                                                                                                                                     |  |     |   |                                                             |  |                                                                                                                                                                                                                  |  |
| <b>Aims and Objectives</b>                           |  |                                                                                                                                                                                                                                                                                                                                               |  |     |   |                                                             |  |                                                                                                                                                                                                                  |  |
| <b>Aim</b>                                           |  | The aim of this project is to Compare the performance of different machine learning algorithms.                                                                                                                                                                                                                                               |  |     |   |                                                             |  |                                                                                                                                                                                                                  |  |
| <b>Objectives</b>                                    |  | <b>Objective 1:</b> To detect and classify network intrusions in real-time, using Machine learning Algorithms Dataset.<br><b>Objective 2:</b> Compare the metrics on KDD cup 99 and NSL KDD Evaluate the performance of model on 70/30 and 80/20 ratio of training/testing.<br><b>Objective 3:</b> To improve accuracy of intrusion detection |  |     |   |                                                             |  |                                                                                                                                                                                                                  |  |
| Starting Date                                        |  |                                                                                                                                                                                                                                                                                                                                               |  |     |   | Expected date of completion                                 |  |                                                                                                                                                                                                                  |  |
| <b>Academic Supervisor</b>                           |  |                                                                                                                                                                                                                                                                                                                                               |  |     |   | [1]. Supervisor-1<br>[2]. Supervisor-2<br>[3]. Supervisor-3 |  |                                                                                                                                                                                                                  |  |
| <b>Academic Supervisor (Approved by Committee)</b>   |  |                                                                                                                                                                                                                                                                                                                                               |  |     |   | Signature                                                   |  |                                                                                                                                                                                                                  |  |
| <b>Industrial Collaborator /Co-Supervisor if any</b> |  |                                                                                                                                                                                                                                                                                                                                               |  |     |   | Signature                                                   |  |                                                                                                                                                                                                                  |  |
| <b>Approved by FYP Committee</b>                     |  |                                                                                                                                                                                                                                                                                                                                               |  |     |   |                                                             |  |                                                                                                                                                                                                                  |  |