



Green University of Bangladesh
Department of Computer Science and Engineering (CSE)
Faculty of Sciences and Engineering
Semester: (Fall, Year:2024), B.Sc. in CSE (Day)

LAB PROJECT PROPOSAL

Course Title: Algorithms Lab

Course Code: CSE 208 Section: 231 D2

Student Details

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Lab Date :
Submission Date : 16/10/2024
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Project Proposal Status

Marks:

Comments:

Signature:

Date:

1. TITLE OF THE PROJECT PROPOSAL

Renewable Energy Optimization Algorithm

2. PROBLEM DOMAIN & MOTIVATIONS

The Renewable Energy Optimization Algorithm focuses on enhancing the efficiency of energy generation from renewable sources, such as solar and wind. With increasing energy demands and climate change concerns, optimizing these resources is crucial for sustainable development, reducing carbon footprints, and ensuring reliable energy supply for future generations.

3. OBJECTIVES/AIMS

The Renewable Energy Optimization Algorithm aims to maximize energy output from renewable sources, minimize operational costs, integrate diverse energy systems, enhance grid stability, and reduce environmental impact. By optimizing resource utilization, the algorithm seeks to ensure sustainable energy production while addressing climate change and meeting growing energy demands.

4. TOOLS & TECHNOLOGIES

The Renewable Energy Optimization Algorithm utilizes tools and technologies such as

- 1.machine learning for predictive analysis,
- 2.advanced simulation software for modeling energy systems,
- 3.optimization frameworks (e.g., genetic algorithms),
- 4.and data analytics platforms for real-time monitoring.

These tools facilitate efficient resource management and enhance decision-making in renewable energy generation and distribution.

5. CONCLUSION

The Renewable Energy Optimization Algorithm is vital for enhancing the efficiency and sustainability of energy systems. By leveraging advanced technologies and optimizing resource use, it addresses climate change challenges, supports grid stability, and fosters a transition to cleaner energy, ultimately contributing to a more sustainable and resilient future.

