

**A PROJECT REPORT**  
**on**  
**NEURO FUZZY CLASSIFICATION FOR DATA**  
**MINING TASKS**

**Submitted to**  
**KIIT Deemed to be University**

**In Partial Fulfillment of the Requirement for the Award of**

**BACHELOR'S DEGREE IN**  
**COMPUTER SCIENCE & ENGINEERING**

**By**

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**UNDER THE GUIDANCE OF**  
**PROF. HIMANSU DAS**



**SCHOOL OF COMPUTER ENGINEERING**  
**KALINGA INSTITUTE OF INDUSTRIAL TECHNOLOGY**  
**BHUBANESWAR, ODISHA - 751024**  
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# **KIIT Deemed to be University**

School of Computer Engineering  
Bhubaneswar, Odisha 751024



## **CERTIFICATE**

This is certify that the project entitled

### **NEURO FUZZY CLASSIFICATION FOR DATA MINING TASKS**

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is a record of bonafide work carried out by them, in the partial fulfillment of the requirement for the award of Degree of Bachelor of Engineering (Computer Science & Engineering) at KIIT Deemed to be university, Bhubaneswar. This work is done during year 2018-2019, under our guidance.

Date:     /     /

**Prof.Himansu Das**

Project Guide

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# ABSTRACT

Artificial Neural Network is a popularly used Machine Learning Algorithm both in research and industry. But the output of ANN fluctuates in a large range, to overcome this defect fuzzy logic is used to increase the number of features and calculate the contribution of each feature in each class. This helps in increasing consistency and accuracy especially for datasets that are not very large.

One of the shortcomings of Fuzzy Logic is that it is very time consuming, so feature reduction techniques such as Principal Component Analysis, Linear Discriminant Analysis, and Independent Component Analysis are used, and the results are recorded.

Finally, feature selection algorithm called Differential Evolution algorithm is also used, and a comparative study is performed.

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