



ACHARYA NAGARJUNA UNIVERSITY
ఆచార్య నాగార్జున విశ్వవిద్యాలయము



FACULTY OF ENGINEERING

This is to certify that

Mr./Ms. Tirupathi Rao Gullipalli

S/O Satyam Naidu

has been duly admitted to the

Degree of Doctor of Philosophy

*in this University, he/she having been declared to be qualified to
receive the same with effect from* 07 October 2021

in the Department of COMPUTER SCIENCE & ENGINEERING

Title of the Thesis :

**EVOLUTIONARY PARTICLE SWARM OPTIMIZATION
TECHNIQUES USING NATURE INSPIRED ALGORITHMS**

The Degree has been awarded in accordance with UGC regulations 2009



Given under the Seal of the University



Nagarjuna Nagar-522 510.
A.P, India

Date : **4 NOV 2022**

PRINCIPAL

**ADITYA ENGINEERING COLLEGE
SURAMPALEM - 533 437**

Vice-Chancellor