# Analyzing GNN Models for Community Detection Using Graph Embeddings: A Comparative Study

Project report submitted to the Amrita Vishwa Vidyapeetham in partial fulfilment of the requirement for the Degree of

#### **BACHELOR of TECHNOLOGY**

in

## COMPUTER SCIENCE AND ENGINEERING

Submitted by

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AMRITA SCHOOL OF COMPUTING

AMRITA VISHWA VIDYAPEETHAM

(Estd. U/S 3 of the UGC Act 1956)

AMRITAPURI CAMPUS

**KOLLAM -690525** 

MAY 2024

#### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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#### BONAFIDE CERTIFICATE

This is to certify that the project report entitled "Analyzing GNN Models for Community Detection Using Graph Embeddings: A Comparative Study" submitted by Devesh Kumar V V (AM.EN.U4CSE20321), Sreesankar S (AM.EN.U4CSE20366), Krishnpriya Dinesan (AM.EN.U4CSE20339) and Pranav B Nair (AM.EN.U4CSE20152), in partial fulfillment of the requirements for the award of Degree of Bachelor of Technology in Computer Science and Engineering from Amrita Vishwa Vidyapeetham, is a bonafide record of the work carried out by them under my guidance and supervision at Amrita School of Computing, Amritapuri during Semester 8 of the academic year 2023-2024.

Ms. Deepthi L R

Mrs. Siji Rani S

Project Guide

Project Coordinator

Dr. Swaminathan J

Chairperson

Reviewer

Dept. of Computer Science & Engineering

Place: Amritapuri Date: 15 May 2024

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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### **DECLARATION**

We, Devesh Kumar V V (AM.EN.U4CSE20321), Sreesankar S (AM.EN.U4CSE20366), Krishnpriya Dinesan (AM.EN.U4CSE20339) and Pranav B Nair (AM.EN.U4CSE20152) hereby declare that this project entitled "Analyzing GNN Models for Community Detection Using Graph Embeddings: A Comparative Study" is a record of the original work done by us under the guidance of Ms. Deepthi L R, Dept. of Computer Science and Engineering, Amrita Vishwa Vidyapeetham, that this work has not formed the basis for any degree/diploma/associationship/fellowship or similar awards to any candidate in any university to the best of our knowledge.

Place: Amritapuri

Date: 17 May 2024

Signature of the student

Signature of the Project Guide

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