VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANA SANGAMA, BELAGAVI – 590 018

A Research/Industry Internship Report on

"CLOUD APPLICATION DEVELOPMENT"

Submitted in partial fulfillment of the requirements for the award of degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

Submitted by:

Nayana Dindadahalli

2KA21CS033

Under the Guidance of

Mr. Nagaraj Baradeli

Associate Professor,
Dept. of CSE,
SKSVMACET, Lakshmeshwar.

Department of Information Science and Engineering

Smt. Kamala & Sri. Venkappa M. Agadi College of Engineering & Technology

Lakshmeshwar-582 116

2024-20

Smt. Kamala & Sri Venkappa M. Agadi College of Engineering and Technology

Laxmeshwar-582 116

Certificate

This is to certify that the internship work entitled "**CLOUD APPLICATION DEVELPMENT"** is bonafied work carried out by **Nayana Dindadahalli (2KA21CS033),** in partial fulfillment of the requirements for the award of the degree of **Bachelor of Engineering in Information Science and Engineering of Visvesvaraya Technological University, Belagavi**, during the year 2024-2025. It is certified that all the corrections/suggestions indicated for internal assessment have been incorporated in the report. The internship report has been approved as it satisfies the academic requirements in respect of internship work prescribed for the Bachelor of Engineering degree.

Signature of the Guide
Mr. Nagaraj Baradeli
Assoc. Professor, Dept. of CSE,
SKSVMACET, Lakshmeshwar

Signature of the Internship Mentor
Mr. Nagaraj Baradeli
Assoc. Professor, Dept. of CSE,
SKSVMACET, Lakshmeshwar

Signature of HOD
Dr. Arun Kumbi
Professor & Head, Dept. of CSE,
SKSVMACET, Lakshmeshwar

Principal
Dr. Parashuram Baraki
SKSVMACET, Lakshmeshwar

Examiners: 1. ***2.***

DECLARATION

I, **Nayana Dindadahalli** bearing the USN **2KA21CS033** studying in the eighth semester of Bachelor of Engineering in Information Science and Engineering at Smt. Kamala & Sri. Venkappa M. Agadi College of Engineering & Technology , Lakshmeshwar, hereby declare that this internship work entitled **"CLOUD APPLICATION DEVELOPMENT"** which is being submitted by me in the partial fulfillment for the award of the degree of Bachelor of Engineering in Information Science and Engineering, from Visvesvaraya Technological University, Belagavi is an authentic record of me carried out during the academic year 2024-2025, under the guidance of **Mr. Nagaraj Baradeli**, Assoc. Prof, Department of Computer Science & Engineering, Smt. Kamala & Sri. Venkappa M. Agadi College of Engineering & Technology, Lakshmeshwar.

I further undertake that the matter embodied in the dissertation has not been submitted previously for the award of any degree by me to any other university or institution.

Place: Laxmeshwar **Nayana Dindadahalli**
Date:

ACKNOWLEDGEMENT

It is my proud privilege and duty to acknowledge the kind of help and guidance received from several people in preparation of this internship report. It would not have been possible to prepare this report in this form without their valuable help, cooperation and guidance.

I wish to record my sincere gratitude to my internship guide **Mr. Nagaraj Baradeli, Assoc. Prof.,** Dept. of CSE, SKSVMACET, Internship Mentor **Mr. Nagaraj Baradeli, Assoc. Prof.,** Dept. of CSE, SKSVMACET, for guiding me in investigations for this internship work and providing encouragement, constant support and guidance which was of a great help to complete this internship successfully.

We are also grateful to **Mr. Basavaraj Soratur**, Professor and **SPOC, VTU Internship Program**, for his unwavering support and encouragement, which were instrumental in completing this project.

I am grateful to **Dr. Arun Kumbi**, Head of the Department of Information Science and Engineering for giving me the support and encouragement that was necessary for the completion of this internship work.

I would also like to express my gratitude to **Dr. Parashuram Baraki,** Principal, for providing us pleasant environment to work in library and for providing laboratory facilities needed to prepare this report.

Last but not the least, we wish to thank our **parents** for financing our studies in this college as well as for constantly encouraging us to learn engineering. Their personal sacrifice in providing this opportunity to learn engineering is gratefully acknowledged.

Place: Laxmeshwar Nayana Dindadahalli

ABSTRACT

The internship offered an in-depth, hands-on experience in the domain of cloud application development, focusing on the end-to-end lifecycle of designing, building, deploying, and managing applications on cloud platforms. The objective was to gain a practical understanding of cloud computing principles, such as scalability, elasticity, fault tolerance, and resource optimization, while working with real-world use cases. Throughout the internship, I worked with cloud service models including Infrastructure as a Service (IaaS) and Platform as a Service (PaaS), leveraging tools and platforms such as Amazon Web Services (AWS), Microsoft Azure, or Google Cloud Platform (GCP). My responsibilities included configuring cloud environments, developing and integrating APIs, working with databases, and deploying applications using CI/CD pipelines and containerization technologies like Docker. In addition, I gained exposure to managing cloud resources, automating deployments, and applying best practices for performance tuning and security in cloud-native applications. This experience significantly enhanced my technical skills in modern development workflows, strengthened my understanding of cloud architecture, and improved my ability to collaborate within agile teams. The internship also provided valuable insights into real-world challenges of cloud application development, preparing me for future roles in the cloud and software development industry.

CONTENTS

Topics	Page No
Chapter 1: COMPANY PROFILE	1
Chapter 2: ABOUT COMPANY	
Chapter 3: TASK PERFORMED	
3.1 Key Learnings	5
3.2 IBM Project	
3.2.1 Introduction	9
3.2.2 Objective	10
3.2.3 Methodology	10
3.2.4 Benefits	11
3.2.5 Results and Discussions	19
3.3.6 Conclusion of project	20
Chapter 4: REFLECTION	21
Chapter 5: CONCLUSION	23
References	24