BLOOD CELL IMAGE PREDICTION

A Industrial/Practical Training project report

Submitted to the Faculty of Engineering of
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA, KAKINADA

In partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF TECHNOLOGY
In
COMPUTER SCIENCE AND ENGINEERING

By

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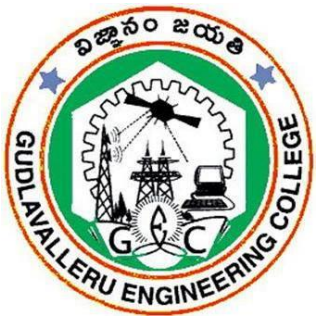

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

GUDLAVALLERUENGINEERINGCOLLEGE
(An Autonomous Institute with Permanent Affiliation to JNTUK, Kakinada)
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2019-2020

GUDLAVALLERU ENGINEERING COLLEGE

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DEPARTMENT OF
COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that the Industrial/Practical Training project Report entitled "**BLOOD CELL IMAGE PREDICTION"** is a bonafide record of work carried out by **CH.MAHENDRA,G.NANIBABU,G.BALU and A.AVINASH** in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology** in **Computer Science and Engineering of Jawaharlal Nehru Technological University Kakinada**, **Kakinada** during the academic year 2019-2020.

SK.SALMA BEGUM

(Industrial/Practical Training Coordinator)

INTERNSHIP REPORT APPROVAL FORM

May 24, 2019

With immense pleasure, this is to approve that the students of Gudlavalleru Engineering College i.e,

Mahendra Chilakalapudi(16481A0533),
Nani Babu Ghantasala(16481A0556),
Balu Garlapati(16481A0554) and
Avinash Adapa(16481A0502)

successfully completed their Project and Project Report on **"Blood Cell Image Prediction"** under our guidance.
We are highly impressed with the work that they have done and commend them on their quick grasping skills. They have shown good intent to learn and have put the knowledge gained into application in the from of this project. We appreciate the hard work and commitment shown by them.
We, hereby approve that this document is completely checked and accepted by Smart Bridge Technical Team. Its been an absolute pleasure to educate and mentor these students. We hope that this document will also serve as a Letter of Recommendation, to whoms over applied.

We wish them success in all future endeavors and a great career ahead.

Akshay kumar Kothuri
AI and IOT Developer

ACKNOWLEDGEMENT

The satisfaction that accompanies the successful completion of any task would be incomplete without the mention of people who made it possible and whose constant guidance and encouragements crown all the efforts with success.

We feel elated to express our floral gratitude and sincere thanks to **Dr.S.Narayana**, Head of the Department, Computer Science and Engineering for his encouragements all the way during analysis of the project. His annotations, insinuations and criticisms are the key behind the successful completion of the project work.

We would like to take this opportunity to thank our beloved principal **Dr.P.Ravindra Babu** for providing a great support for us in completing our project and giving us the opportunity for doing project.

We would like to take this opportunity to thank Smart Bridge Educational Services PVT Ltd. for providing this training program and support for us in completing our project.

Our Special thanks to the faculty of our department and programmers of our computer lab. Finally, we thank our family members, non-teaching staff, attendants and our friends, who had directly or indirectly helped and supported us in completing our project in time.

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ABSTRACT

Deep Learning has already shown power in many application fields, and is accepted by more and more people as a better approach than the traditional machine learning models. In particular, the implementation of deep learning algorithms, especially Convolutional Neural Networks (CNN), brings huge benefits to the medical field, where a huge number of images are to be processed and analyzed. This paper aims to develop a deep learning model to address the blood cell classification problem, which is one of the most challenging problems in blood diagnosis. A CNN-based framework is built to automatically classify the blood cell images into subtypes of the cells. Experiments are conducted on a dataset of 13k images of blood cells with their subtypes, and the results show that our proposed model provide better results in terms of evaluation parameters.