<TOPIC>

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

## BACHELOR of TECHNOLOGY

**in**

**COMPUTER SCIENCE AND ENGINEERING**

*SUBMITTED BY*

**MAY 2021**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING AMRITA VISHWA VIDYAPEETHAM**

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

**Amritapuri Campus Kollam -690525**



**BONAFIDE CERTIFICATE**

Your Guides Coordinator name

Project Guide Project Coordinator

Reviewer

Chairperson

Dept. of Computer Science & Engineering

Place: Amritapuri Date: 17 May 2021

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING AMRITA VISHWA VIDYAPEETHAM**

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**DECLARATION**

We, **<NAMES>** hereby declare that this project entitled **<TITLE>** is a record of the original work done by us under the guidance of <NAME> Dept. of Computer Science and Engineering, Amrita Vishwa Vidyapeetham, that this work has not formed the basis for any degree/diploma/associations/fellowship or similar awards to any candidate in any university to the best of our knowledge.

Place: Amritapuri Date: 17 May 2021

Signature of the student Signature of the Project Guide

# Acknowledgments

Abstract

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**1. Introduction**

# Problem Definition

**4. Requirements**

The design of this project contains both hardware and software. The specifications are listed below.

## Hardware

## 

One can train a model either locally, or by using a cloud service. We were able to train ResNet50, GoogleNet locally, and EfficientNet on Google collab.

The models were trained on a laptop consisting of an I5 8400H as well as a GTX 1050 4GB VRAM.

## Software

All of our models are being trained and tested in Python. For training the models locally, we needed to install the Nvidia CUDA Toolkit. We did use the scikit, numpy, Keras, and the pandas libraries extensively.

The Nvidia Cuda Toolkit helps us to run GPU- accelerated applications locally, provided we are using an Nvidia GPU(in this case, a GTX 1050). Google Colab was only used to train the EfficientNet model, due to not having the recommended computational power locally

**5. Proposed Methodology**

# 6. Result and Analysis

**7. Conclusion**

# References

# Appendix A

**Source code**