** Selected2 cover sheet **

**Faculty of computer and artificial intelligence.**

**CS396\_Selected CS2 (2021-2022).**

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|  |  |
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Image Classification Based on the Boost

Convolutional Neural Network

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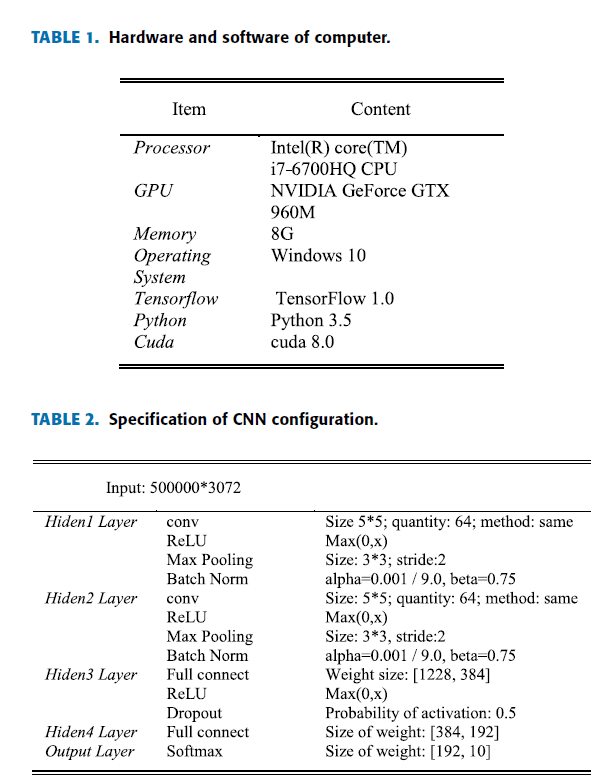
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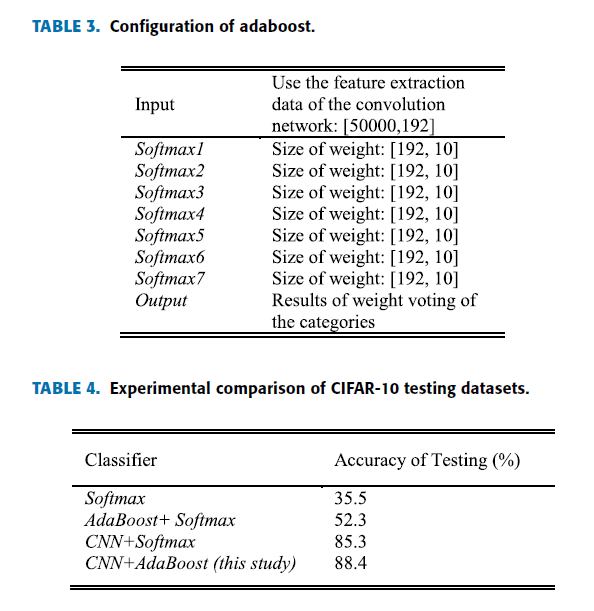
This work was supported in part by the Key Laboratory of Software Engineering of Yunnan Province under Grant 2017SE202, in part by

the Applied Basic Research Foundation of Yunnan Province under Grant 2016FB104, in part by the Yunnan Provincial Innovation Team

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**Project Description Document:**

**General Information on the selected dataset:**

**Rock-Paper-Scissors**

<https://drive.google.com/drive/folders/1ERpc8o3Z1o8srtvMkmrQKGf-5_1ZdiJH?usp=sharing>

Total number of samples: 2892 sample.

the dimension of images: (227, 227, 1).

number of classes: (3).

their labels:

1-paper

2-scissors

3-rock

**CIFAR-10**

<https://www.cs.toronto.edu/~kriz/cifar.html>

Total number of samples: 60000 sample.

the dimension of images: (32, 32, 3).

number of classes: (10).

their labels:

(1-airplane, 2-automobile ,3-bird, 4-cat ,5-deer ,6-dog, 7-frog ,8-horse, 9-ship, 10-truck)

**Implementation details:**

**CIFAR-10**

Training (83.3%=50000 image), validation (16.67%=10000) and testing (16.67%=10000).

**Rock-Paper-Scissors**

Training (87.13%=2520 image), validation (0) and testing (12.86%=372).

CNN on cifar-10

A picture containing text

Description automatically generated

**A picture containing chart

Description automatically generated**

CNN on Rock-Paper-Scissors

Chart, line chart

Description automatically generated A picture containing graphical user interface

Description automatically generated

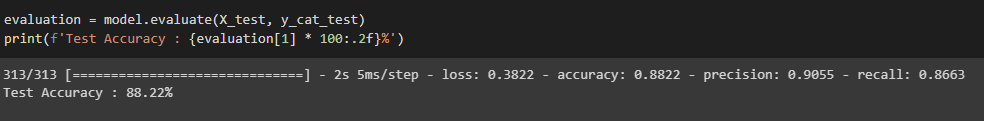
**hyperparameters used in your model:**

learning\_rate=0.0003

**Rock-Paper-Scissors training model**

**Results details:**

CNN on cifar-10

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CNN on Rock-Paper-Scissors

**Text

Description automatically generated**