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: Dr. Bhuvanos har Guide

Analysis of CNN and Naive Bayes TITLE: Comparitive Algorithm for Ivan deficiency detection

# paragraph 1

Abstract:

Iron deficiency is one of the global public health problem that effects children and presnort women the hon invasive approach such as machine leasing algorithms is are of the procedures that used to defecting Ivon deficiency. Which is most effective and timely vexilts avierted.

Introduction.

on:
To determine the offeet of Iron. deficiency detection using CNN compased to haive Bayes, CNN is excellent for image classification and cost effective.

Total number of astides published on this topic is more paragraph 2! than 32 papers from exhab Itel Explore. Most cited articles:

- \* Kavsaoolu AR, polat k, Hariharan Non inbasive predictor of homodown level using machine learning techniques, 2015
- Al-alimi, Basharter prevalence of iron deficiency aremia among university student in Hoderda, 2018
- \* passicha, Tye-Din Ivon deficiercy 2021
- Dithy, kvishraphya Aremia selector in pregnarcy women by using random psediction 2019
- Ichan, choridhury ranche positions algorithms to predid the childhood aremia, 2021

Applications! + tasky defection and disrosis patient screening Decision support for health case professionals public health clinical trials and reasearch Remost movitoring pasassaph 3! Mari Data availability are quality: Data is collected from homitals using Iroho collect app about patient Hovalue, age, Gorden, disease and palm images of Aremic and non Amenic polients. Algorithm Complexity and perforance: Designing and ophimizing chili algorithm for ison-defection doficiency is intersive and sophisticated technique. Rotore the study began the othical consent from various hospital Ethical consideration, complete and consent of children's parents for taking pictures of palm One taken into account: Feature extendion. Identifying the most informant features and optimizing features extraction motheds for (MN and could be mote complexe. Materials and methods pasagaph 1. · Study cotop: Savootha school of engineentry · ru of groups: 9 · samplo size: 10

· Total 8120: 20

Dataset: palpable palm images of Arrenk and The dokused for von Aremic patients is taken from "Mendeley Data! the Charles Son Miss paragraph 2: Sample oftoup 1:10 torfing 1/A procedure: [CNN] 1: Defre the polon impathy Libraries CNINE ii) Grather, prepare duter iii) Spit data into Training and Testing Self Data preprocetyly tradel Architecture in Build a CNN model model compilation v.> Campile the model Vill Train the model

Vill Train the model

Vill Train the model > rackel Training thatel ovaluation paragraph: 3 [Naive Bayes] procedure; i) pathe the padden is hatter and propurodate 1113 prepaded Text Neda split bate into Training and Testins sets. ivs W Train a Naive Bayes classites predictions. Make vis Evaluate the Model (iiv vilis Fine Ture improve ix.) Deploy palagraph 4 · Groogle Collab Itel core 13 80B RAM windows operating system D SPSS IBM Test procedure: Credition the defeated that contain information about From distincting boda collection. detection

Implementing convolutional nound retroots algorithm and model devolopment: model with text features

Training and testing convolutional newal notworks Training and Testing: model that evaluates its performance

## paragraph -5:

5. NO	Algorithm	Sounds 2156	Accoracy	
	CNN	(0)	98.49	
2.	Naive Bayes	10	€5.6€	

i) statistical software used: IBM SPSS version 27

ii. > Independent variables: \* CNN \* Naive Bayes

iii.) Results and Discussion:

Table 1: It displays the improvement of accuracy of CNN

Table 2! It dispayes the articipated accurracy of Naive Bayes Table 3: provides the accivacy after Naive Riges with CNN using standard oran

Table 4: Computes the accusacy of Naive Buyes to trat of CNN

Drevious literature,

Difficult in active more accuracy with Norve Bayes become of its independence blu features , transmot capture complex relationships in image

CNN can be combined with Nave bases because other Foore sope; machine reasoning Algorithms to aget improved techniques of solving problems

conclusion,

CUN algorithm is good in recognization of palm image u and image classification. which contains 9 f. 49 of a of accuracy compared to Naive Bayes of 8246 %.

Alcwary.

#### T-Test

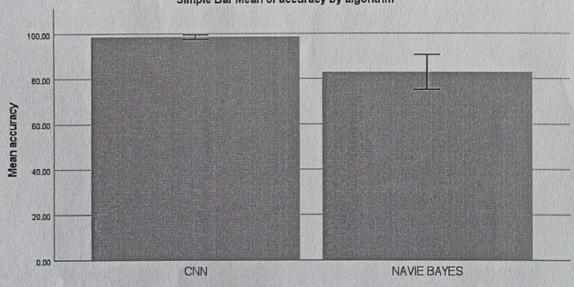
**Group Statistics** 

	algorithm	N	Mean	Std. Deviation	Std. Error Mean
accuracy	CNN	10	98.4960	1.56927	.49625
	NAVIE BAYES	10	82.8860	12.20945	3.86097

### **Independent Samples Test**

Levene's Test for Equality of t-test for Equality of Means Variances 95% Confidence Interval of the Sig. Std. Error Difference (2-Mean Difference Difference Lower F Sig. tailed) 3.89273 7.43168 23.78832 .000 4.010 18 .001 15.61000 accuracy Equal 19.120 variances assumed 4.010 9.297 .003 15.61000 3.89273 6.84677 24.37323 Equal variances not assumed

#### Simple Bar Mean of accuracy by algorithm



algorithm

Error Bars: 95% CI Error Bars: +/- 2 SE