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Cite as: AIP Conference Proceedings **2393**, 020078 (2022); https://doi.org/10.1063/5.0074142
Published Online: 19 May 2022

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Deepq: Residue Analysis of Localization Images in Large Scale Solid State Physical Environments

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Abstract. Deep Learning is the process to led machine learning, natural language processing and neural networks. The various deep learning models, computer vision systems and artificial intelligence services are used to study of various real time applications. Due to lack of computing resource the conventional neural network are produces delay in progress and reduce the GPUs performance and throughput. In this paper we review difference deep learning approaches with increases GPUs performance and apply various image processing classification and localization techniques. The high availability and GPUs performance can be verified by state-of-arts results using conventional deep learning methods.

Keywords: Deep Learning, Computer Vision, GPU Performance, Classification, Localization, CNN Model, DeepQ Process

INTRODUCTION

Deep learning is the major division of machine learning and neural networks. Learning are played important role in access and processing information and produce real time results. But the normal methods areaffects the throughput and GPUs performance. Deep learning process are includes the chip processing, dataset sizes, processing delays and performance [1]. Deep learning process has proven concept used in search engine, bio-informatics, robotics, industrial internet, multimedia applications, machine vision systems and game programming. In current scenario the conventional multi process environments leads compressed sensing and distributed multiuser sensing approaches [2]. The Bio-inspired computing is used to solve visual cortex, behaviours, small regions failures and multi-layer perception. The following figure 1 shows that the conventional neural network architecture and it produces the visual scheme annotation in each layers.

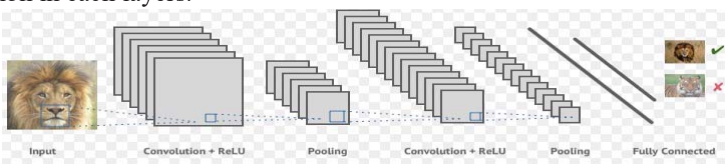

FIGURE 1. Conventional Neural Network – Deep Learn Model

The convolution and pool layers are used in conventional deep learning process for measuring local batches [3]. Each batch log collected by features of visual recognition inputs and processed by similar batches or predefined batch results. But this method could produce delayed in performance and reduced GPUs throughput[10]. The convolution layer shares the behaviours and regions specific results. The Pool layers produces after the result of convolution each logs recorded and used for decision making results. The Object recognition techniques applied in recent years for measuring online based trade marketing. Each log can be labelled for extracting features and fix the localization.Image annotation is important problem to set each localization values and it collect the information automatically and fix the artificial intelligence results. Natural Language processing and Computer Vision are dominating large number of public repositories.This paper describes following sections, section II describe various researches and literatures, section III handle deep learning process, section IV describes process and reviews and section V gives conclusion and future enhancements.

Recent Trends in Science and Engineering
AIP Conf. Proc. 2393, 020078-1–020078-6; https://doi.org/10.1063/5.0074142
Published by AIP Publishing. 978-0-7354-4198-9/$30.00

LITERATURE REVIEWS

Deep Learning process involved in future of learning and produced analysis report in each stages. It gave exact results and log can be monitor for making decision. ImageNet 2012 conference, shows the deep learning survey includes the error rate 5% achieved with low sustainable GPUs performance [5]. ConvenNet used for reducing delays and increases the throughput but the resolutions are drastically changed so the performance degrading the results. The number of attempts applied to improve the quality and very less amount of semantics only used for measure GPUs performance [10]. Myeongsuk

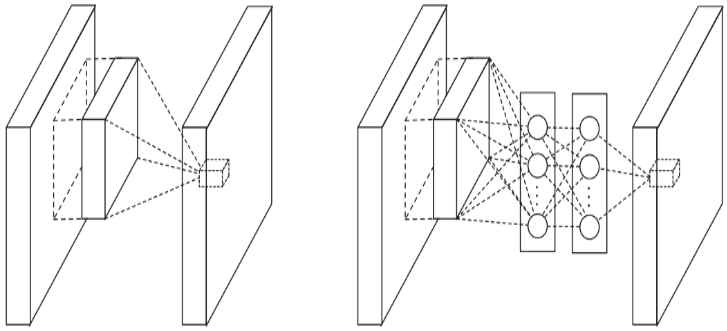

FIGURE 2. Next Architecture with Deep Learn Process

Pak et al, presented AlexNet model with 5 convolution layers and 3 pool layers are used and each connected with feedback results. ReLU method applied to measure non-linearity results and kernel level also changed. The following figure 2 shows that NextArchitecture with deep learn results.The challenges of CSI feedback method has motivated with spatial and temporal locations. Each stage the comprehensive sparse Methodist calculated with undetermined channel optimization. Multilayer perception is applied for measuring image annotation and image recognition policies. Sanghoon Kim et al, produced the semantic relation between each layer can be measured and resultant output used in next feedback. According to the result of Manikandan et al, the relationship between disease and treatment measured by semantics results and syntax procedures [6]. The survey of visual geometry group the deep content are applied for calculating layered results with decision making capabilities[11].The spatial coordinates results can be obtained by DeepQ procedures and pool methods produced the localization and annotation results [7]. The analysis of various literatures the deep learning process applied for calculating artificial learning results, feedback results and real time processing. The GPUs performance and throughput will be calculated by applying different learning algorithms.

CONVENTIONAL DEEP LEARNING MODEL

Deep Learning process model is extracting log information from visual features of computer vision inputs. The hierarchical learning method is applied to calculate edges, shapes, sharpen values. Three central problems are identified with some bases.

i. Select existing Deep Q learning methods for reconstructing new results
ii. Apply feedback process for large number of delay and throughput measurements
iii. Apply encoding and decoding methods for sensing and recovery methods

Encoding is used to select random projection and compressed trained set values. Codeword representations are applied to measure channel distribution and localization inputs. Decoding is used to learn inverse transform to collect iterative results. User equipment module is collect original messages and codeword values. Deep Learning is used to learn inputs from encoding stage and reconstruct natural images. The performance of Deep Learning is calculated by using data dynamically reduction methods.

We described various pre-processing and post processing techniques to calculate efficient deep learn results.

PRE-PROCESSING

The input image date collects from encoding stage and apply mean subtraction, RGB calculation for each pixel values. Normalization is applied for each at every pixel for selecting interpretation and each dimension values are calculated for single value measurement. For example, following figure 3 shows that mean square and RGB calculation. Example to subtract a single pixel values and we get following results RGB(114.56, 145.28 and 109.23].

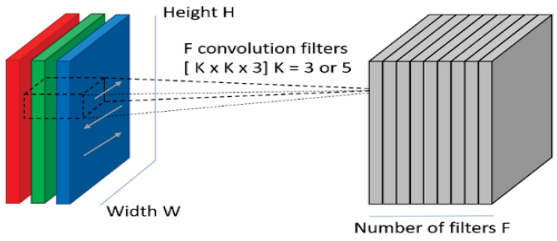

FIGURE 3. Single Pixel Calculation using RGB codeword

Local Response Normalization is applied to set configuration, mapping, conversion, pre and post processing. The following figure 4 shows that dimensionality reduction procedure in each stage wise.

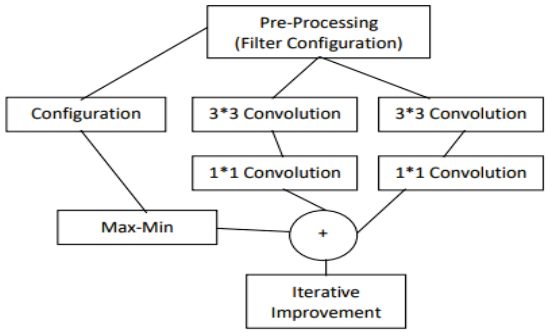

FIGURE 4. Dimensionality Reduction methods

We consider single level system model can be obtained N – Number of iterative improvement stages and l – specifies length of each reduction values. The sub career values measure byY = $\sum_{i=0}^{N} l(max * \min)$ N = 0,1,2,...

(1)By applying DFT calculation H = y + set of configure values, the encoding sequenceE = H + L (where the dimensionality values are identified up to lower level reduction)

CONVOLUTION AND CONNECTIVITY

Convolution method is applied for calculating linear and nonlinear learning inputs and logs. Each manifest values and description are calculated pixel score values. Support Vector calculation used to encode result calculation and set the constraint factor sensing input values. The following loss function is applied to measure volume of layer results

Mean Square Value L(Θ) = $\sum_{i=1}^{E} ||f(max * min) + y(i)$ (2)

We arranged three dimension values length, breadth and height and reduced input coefficient values. Because each input values are transformed by code word policies to set of fully connected layer values. The high dimension of input images or values is analyzed by using local region and receptive region parameters. The connectivity is high end parameter; it is measured by filter size and single node calculation factor. We treat spatial coordinate's values into single level values and measured depth of each coordinate position values. Padding. Padding process is used to convert binary value parameter for calculating each accurate results and analysis deep results. Each stage zeros and ones are adjusted by small changes in calculation points. The input and output coordinate values are measured by using following points.

i. First select each coordinate position and convert n*n matrix pixel values. This stage provides the code word values.

ii. Second apply iterative reduction procedure and reduce further matrix deep values.

iii. Third apply padding values for more accurate results. Advantage of this method is used to measure connected layer values.

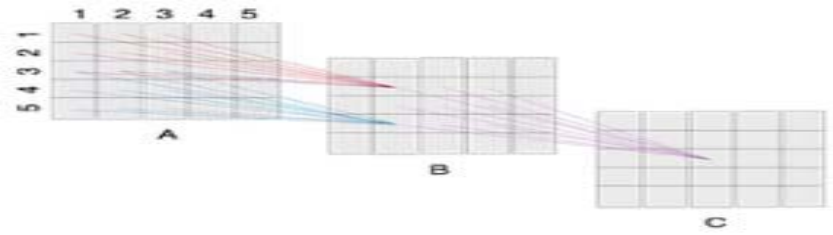

FIGURE 5.Iterative reduction procedure

METHODOLOGY

The fully connected layer provides each stage analysis report and it gives GPUs performance and throughput results. The computation cost measured by using time and memory values. Rectified unit can be measured by the maximum value of length calculation parameter. The gradient and sparse index calculator applied for conversion and padding calculation.The following figure 6 shows that quad tree based maximum pool process

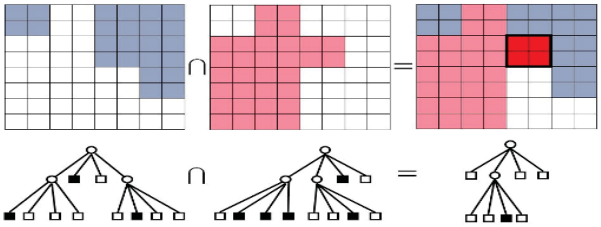

FIGURE 6. Maximum Pool – Quad Tree Deep Learn

The large number of input coordinates applied and quad tree process applied to learn depth learning in each node values. The following residual function applied for calculating number reduction in each stage.

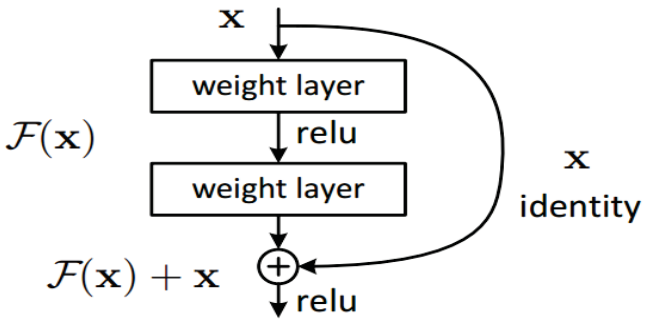

FIGURE 7. Deeper Q Residual process

The following steps are used to implement deep learn process in each stage

Input: Set of images or coordinate values
Output: Connect layer results with deep queue logs
Steps:
i. Collect proper annotated data or sensed input images
ii. Apply pre training phase for collect original data set for processing
iii. Tuning process applied for measure localization, classification and cluster results
iv. Machine Learning algorithm applied for calculating coordinate position and each pixel connected values for multi object results
v. Apply Uniform distribution process

F(x) = $(\sum_{i=0}^{N} Setofinputvalues(i) + y$

vi. The weight can measured for setting throughput benchmark
vii. Object Detection technique applied by using quad tree and padding formulas
viii. The whole image or pixel values are divided very small portion of deep q results
ix. Based on deep q result we identified correct part, mistaken part, elimination part and rejection part

The following results shows that average performance indicator values. The accuracy can be measured by number operation and iterations completed.

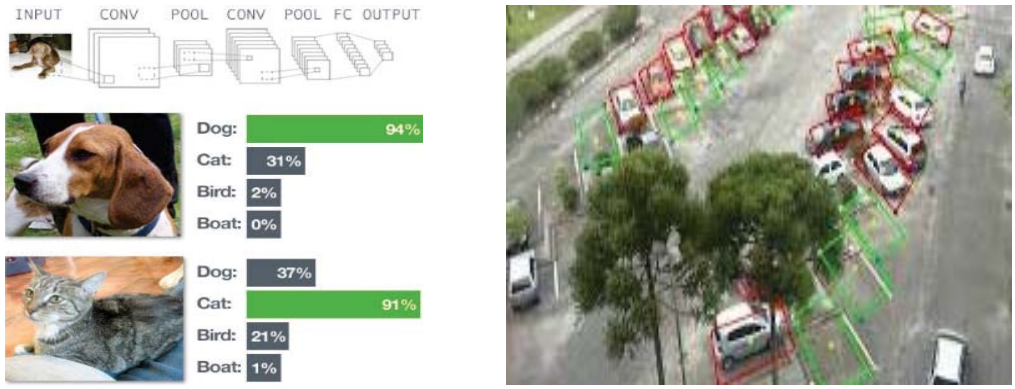

FIGURE 8. Deep Q results with object and location based

The accuracy calculation we applied both region based and location based object labelling procedure. The set of input values actual and predicated values are set by using Deep Q algorithm and we got following accuracy values of set of 100 input images or coordinate values.

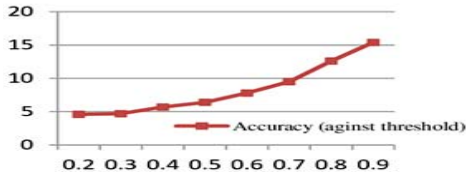

FIGURE 9. Accuracy and Threshold for set of pixel values

CONCLUSION

Deep Learning process is involved in artificial intelligence, data analytics and natural language processing applications. We presented Deep Q based learning model for analysing input images and produced connected object results. The convolution neural network applied for deep learning process in pattern and image processing. This method achieved high accuracy and improved GPUs performance. We used deep learn based divide and classification methods for detect and locate each coordinate position. We use combination of deep learn using convolution and queue based approach. In future we will use more number of input images and apply ontology based input mechanism.

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