

TensorFlow endorse to lessen the tension in Traffic management

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Abstract

Looking towards trends and planning to get the new innovation to world having such kind of passion make us to think in a peculiar way to make the iteration with multi disciplinary collaboration with normal life style problems solvation by technology and science , this traffic problem is there from the decade but , we can't chase each and minute by role like image processing , AI, and all. So thinking in a different way TensorFlow is ready with support to stand as backbone for our project with semi supervised data set in cluster. Where each is inter connected in network flow.

Key words:-TensorFlow , semi supervised, cluster, network.

We are with the data of antithetic hence we leave in polar world. Though each is with variants in its attire. In few cases we need to consider the data either if it is, image, audio, video, text, alphanumeric etc., in its storage format as well the accessing of it. The move of research field took diverse of approach to new aspirant one who want to establish their theme as a gift to the trend of words, methods, iterations, functions, modules, and techniques

etc., as well the flow of data mining, big data, cloud computing, artificial intelligence, neural network especially we say all are now become an family members are children's of machine learning in a respect if u dig the concept. For example, we are using KNN, Naïve Bayes algorithm, CNN, and many more, all together we are using it under the roof of Machine learning. Google and research using the concept of machine learning they started giving many gifts like, Google maps useful for unknown place visit. Google pic and lens to identify the object nearby which is so much helpful in image recognition. Many applications they launched by the application of machine learning, artificial intelligence and neural network in Google I/O 2018.

Each of the apps was so useful and developed for the concern of layman usage.

Now they are with Google Brain as a team and research or innovative center we can call which goes on giving the swiftly gift to the globe or to us. In that one of the main tools which is more widely used and famed one is TENSORFLOW. TF is a programming tool, as well open – sourced API which is referenced

under Apache 2.0. which is with extensive application in many fields as such image recognition as first, Natural language processing toolkit, data classification, object detection and pattern tracking biological identification and galore of apps.

II. Survey

Here in this paper we concentrating on TensorFlow and its usage purpose as well the utilization of the set of operations skills to set up the model using the TensorFlow as a programming language .TF initially was with C++, as well the trend move to too had a helping hand towards python, which is very much important programming language used in many places. In the computation programming we are with many frameworks which help us to give life to our ideas. As such comparing with different framework suitability for TensorFlow working and suitability or adoptability it feels bit happier in python, and now in R too. FIG..1 [01] describes the platform suitability hence we are with CPU's to GPU' S and TPU'S.

	Caffe	TensorFlow	Torch	Theano
Language	C++, Python	Python	Lua	Python
Pretrained	Yes ++	Yes (Inception)	Yes ++	Yes (Language)
GPU	CUDA, Opocl	CUDA	CUDA	CUDA, Opocl
Good at RNN	No	Yes (Best)	Mediocre	Yes

Fig.1.tensorflow variants and its support with programming language.

Compared to other model if I anyone needs to work in GPU's matching algorithm to speed up and control the flow, we in need of a tool which is TF.

TF is a set of nodes with connectivity called as nodes which means to say as in the form of graph. This plotting of graph explains the concept of the iterations happening and the communication between each node, whereas few are meant for connectivity and few for monitoring, and few for controlling and instructing the job. And the rest to carry the job form one node to other. Which in graph of computational methods either by C++ or python implementation. We can use this as a backend in the server connectivity as a set of data flow. Because special edges in the graph also known as control dependencies which are not with any work but wanted to show and complete its graph connectivity before the destiny node. Plotting of graph is not an easy task. It needs to be planned as session of an event. TF must be called in programming as `Tf.sess(start)`

Tf is with different operations with type of supplement for our regular usage as shown table in the same paper. Stating that it supports almost all aspects of mathematical as well scientific calculation purpose needed data manipulation methodology. As shown in the below table.

TF is with concept of FF that is FEED and Fetch. Where initially all nodes are with EMPTY status, once the flow get initiated they will start with Assign-Add, write, Read, Split, Project [5] and tensor connectivity signals will be given to these who has to be in active participation in the lane, If other node or we can say edge which is not having active participation that one should be complete with

the task in the lane to which it is connected to make iteration complete in action. Sometimes it may not be as expected hence few with NON-EMPTY criteria, so what they will do, they must wait till the completion of the subordinate. The transit of tensor to tensor from source to destiny. Having its own path and behavior with variable edges, which may be input or output each variable is with value x as $\text{VarValue}(x)$ in tensors. As we are discussing about this node connectivity [1] it will be single as well multi-device execution. Here the node placement is with main role hence we need to map the reckoning into set of devices which are considered for connectivity or available for our process. Here as obviously we need to think of cost of node availability as well reachability there is a communication between single processes either by deciding it is CPU OR GPU OR any other type of worker associated will be encountered wherein distributed, we are with master-slave concept. The master must master each processor if we say with its assignment of task. If we mention the type of processor it's enough within a fraction of seconds it will change the attire with the processor. It's all done by the code set called

```
Tf.Assign() // the processor model.
```

If we concerned to processor means naturally there will be kernel implementation or presence. For example if we going with mathematical operations means, we with BLAS[1,15],cuBLAS[1,39],GPU like that where as in for neural network with deep learning concept it's with cuda-convent[1,28] which is most widely applicable in deep neural

network operations as well cuDNN[1,9].this whole is a glimpse of synchronous , but for asynchronous kernels it is with queue concept it in INCLUDE, ENQUEUE and DEQUEUE.

Because in asynchronous the execution will be at the end of all node.

Rasika pandas et al., [01]used same TensorFlow to do an iteration in object detection and pattern tracking they succeeded with daily used things like remote, bottle, cell phone and bed with aspect ratio respectively . They go with REMO as a framework for motion or to find the demeanor of attributes in the group of entities. For the matching specification they iterated with Flock, Leadership, and Convergence and lastly encounter. And use to guide the data to be in leadership rather than other, hence which leads to propagate the process towards goal to be reached. In the same way Laurie Butgereit Etal., with very nice approach using this TensorFlow to guide or assist tourist person in rural southern Africa using machine learning concept. In the southern Africa evidently, safari will be they're and the main drawback is no cell phone network region. Other thing is all the tourist persons are not familiar with the animal species and its nature is not known to any one in common. So they thought an idea to develop an app which gives them a brief introduction about the road and animals with pictures and description. Initially they planned for 100 later it extends to thousands of data sets or images and execution of algorithm as well the methods. Lastly, they succeeded hence the size of the app data to be downloaded is just 110 mb to 150 mb. With

very good guidelines to tourist fellows. This can be used by the govt. of respective place and those roam with self-safari in their vehicle. But unknown with the accidental hazards. To activate and to succeed in this project they used DSR (Design Science Research) lab to create this model.

III. Objective of Project

Using the concept of African safari guidelines and image or pattern recognition with data differentiation and detection .our project leading make the changes in remote places traffic and as well stretched to highway. By predict and notify the traveler as well the security centers to give it as an alarm or notifying about the actual cause of accident as well the prediction level of accuracy or ratio of participation of each node, to get to know which node is actively participated which not as well which is EMPTY node but connected in the network or process. Is the thing we are iterating using TensorFlow 1.0.for our project. Now it's in implementing stage to implement the target value to noise the range of noisy input into noiseless before letting it to processing.

Conclusion

This TensorFlow became a boon to this trend of technology, with very good supportive in many angles of guidance how can we implement the things in multi variants like multiprocessor of multitasking we can say. Hoping our project with success, we are

writing this paper as our second stage of success footsteps.

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