Introduction

This repository is a collection of programs written as exmaples in Tensorflow V2. Programs are combined into following three sections-

- Example scripts
- Short tutorials
- Collaborative projects

Motivation

Primary objective of the project is to gain an in-depth understanding of functional and operational characteristics of Tensorflow V2. These include Tensorflow syntax, Keras API, control flow and dynamic computation of graphs. Example scripts will build the understanding of writing programs in the basic Tensorflow structure. Short turtorials aim to serve as notes and reference materials for future application development. And finally, collaborative projects will lead to the development of practical Tensorflow aplications for solving a challenging problem.

Study Material

- ☐ Tensorflow Documentation (primary resource)
- ☐ Repository of Tensorflow v2 Examples (primary resource)
- ☐ Tensorflow for Beginners (secondary resource)
- ☐ Old Tensorflow repository (just in case)

Agenda

Following is the tentative agenda-

Date	Topic	Programs	Reading	Remarks
21/12/2020	Introduction	ANN, CNN, Autograph, LR		
22/12/2020	Deep Convolutional Models-1	Inception		
23/12/2020	Deep Convolutional Models-2	VGG, ResNet		
24/12/2020	Memory-based Models	RNN, LSTM		
25/12/2020	Adversarial Learning	GAN, Pix2Pix, CycleGAN		
26/12/2020	Distributed Training	DistGPU		
27/12/2020	Test-1	implement 2 programs		
28/12/2020	Language Models	BERT, GPT3		
29/12/2020	Case Study	Chinese->English in BERT		
30/12/2020	Reinforcement Learning	A2C, Dreamer		
31/01/2021	Test-2	implement 2 programs		

Date	Topic	Programs	Reading	Remarks
01/01/2021	Project Day	project		
02/01/2021	Project Day	project		
03/01/2021	Project Day	2 project		

Potential Project Topics

- ☐ CycleGAN
- ☐ DeepDream
- ☐ DCGAN
- ☐ Pix2Pix
- ☐ Adversarial FGSM
- ☐ VAE