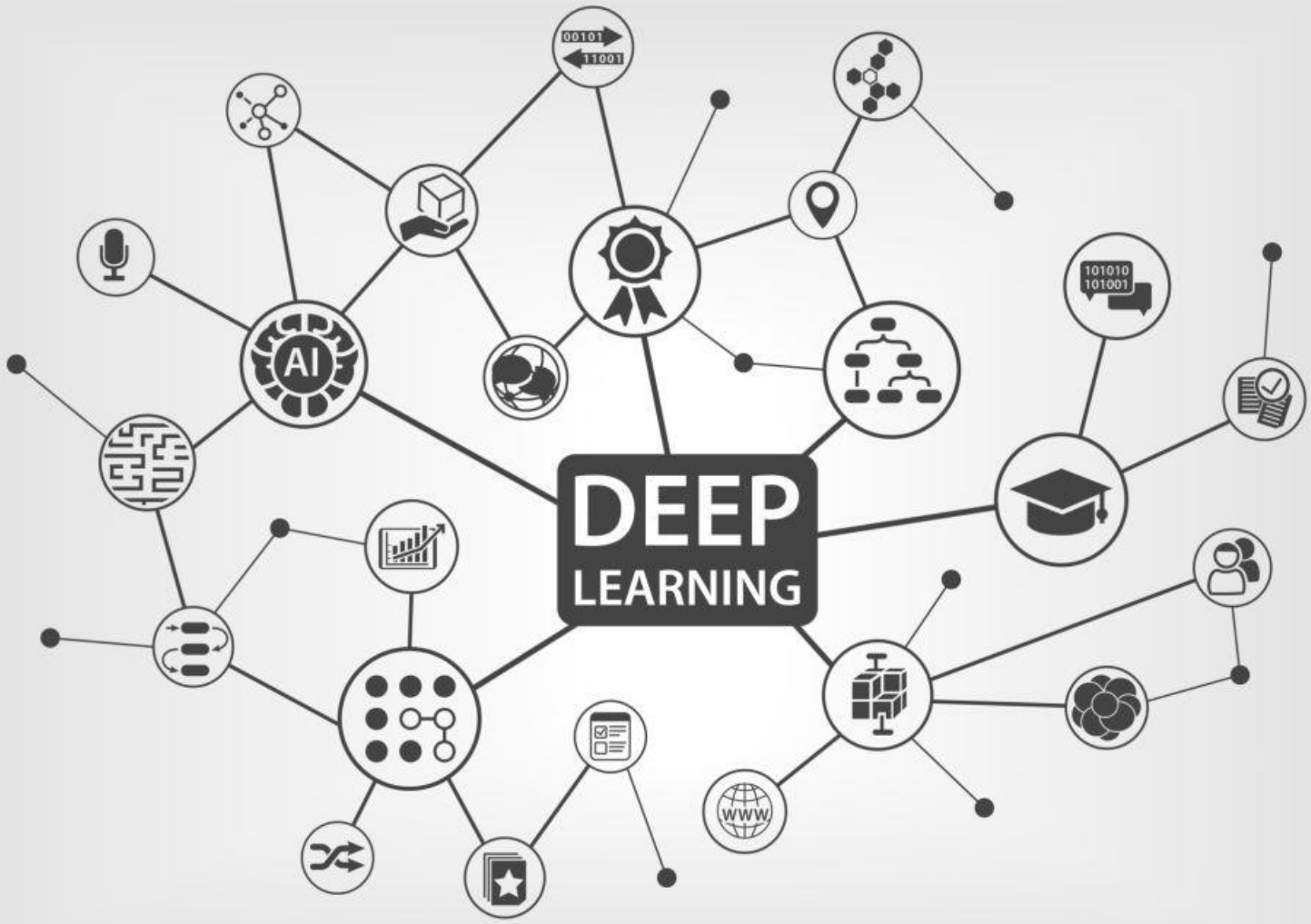

Artificial Intelligence with Python & TensorFlow 2.0

Master Module

- Python & the working environment
- Machine Learning Basics
- Intro to TensorFlow & TF.Keras
- Deep Learning Basics
- Intro to Computer Vision
- Intro to Natural Language Processing
- Deep Learning + Computer Vision Usage
- Deep Learning + NLP usage
- Deep Dive into Conv Nets and emerging Architectures
- Applications of Computer Vision
- Deep Dive into RNNs, LSTMS & Attention based Models
- Exploring Datasets for Deep Learning
- Implementing State of The Art Models
- Deploying Deep Learning Models
- Generative Deep Learning

Module Description

Python & the working environment

- Python Refresher
- Environment Tour

Machine Learning Basics

- Intro to Machine Learning Algorithms
- Training and evaluating Machine Learning

TensorFlow & Keras

- Intro to TensorFlow
- Intro to Keras

Deep Learning Basics

- Basics of Deep Learning
- Training and evaluating simple DL Models

Intro to Computer Vision

Intro to Natural Language Processing

Deep Learning + Computer Vision

Deep Learning + NLP

Deep Dive into Conv Nets and emerging Architectures

- Conv2D + Pooling
- Implementing different types of Conv Layers
- Implementing Resnets
- Implementing Inception Layers
- Implementing mobile friendly architectures
- Transfer Learning and Fine Tuning
- Project work

Applications of Computer Vision

- Implementing Multi class Multi label classifier
- Implementing Object Detection models
- Implementing Image Segmentation models
- Project Work

Diving into RNNs, LSTMS & Attention based Models

- Implementing RNN
- Implementing LSTMS
- Implementing Attention based models
- Text classification
- BERT, ELMO, GPT-2
- Transfer Learning in NLP
- Project Work

Exploring & Creating Custom Datasets

- Exploring Datasets for Deep Learning
- Searching for public datasets
- Creating your own Datasets
- Project Work

Implementing State of The Art Models

- Computer Vision based Models
- NLP based Models

Deploying Deep Learning Models

- TensorFlow Lite
- TensorFlow Serving
- TensorFlow Js
- TFX
- Intel OpenVino & One API
- Project work on deploying DL Models

Generative Deep Learning

- AutoEncoders
- Generative Adversarial Networks (GANs)
- Exploring state of the art models
- Project work using GAN

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