

Practical 1

Roll no. 18BCE191

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Aim: Explore Open-Source AI Tools

Tool Name	Suitable scenarios	Applications
Tensorflow	<ul style="list-style-type: none">• Designing and deploying neural network based AI models.• Available for various languages like java, python, javascript, c++ etc.• Highly optimized, and hence can be used for higher performance applications.	<ul style="list-style-type: none">• Automated Image captioning.• Image classification models.• NLP based AI models.
Keras	<ul style="list-style-type: none">• Python based high level library for developing CNNs and RNNs.• Various pre-trained models are readily available.	<ul style="list-style-type: none">• Image classification.• Image segmentation.• Sentiment classification.• Text summarization.
Auto ML	<ul style="list-style-type: none">• It allows data scientists, analysts, and developers to build ML models with high scale, efficiency, and productivity all while sustaining model quality.	<ul style="list-style-type: none">• Full set of features.• Parallelize child runs.• Large data support.• DNN-based featurization.• Dynamic scalability of compute clusters on demand.
DJL	<ul style="list-style-type: none">• Deep Java Library, used for deploying AI models in enterprise java based applications.• Built on the top of AI frameworks like Tensorflow, Pytorch etc. hence	<ul style="list-style-type: none">• Deploying AI models on java based spring applications.

	it is optimized for performance.	
Pytorch	<ul style="list-style-type: none"> • Used for faster development. • Suitable for Research projects. • Highly customizable. 	<ul style="list-style-type: none"> • Good alternative to tensorflow.
CNTK	<ul style="list-style-type: none"> • It has a broader range of APIs such as Python, Java, C, C++. 	<ul style="list-style-type: none"> • Creating deep learning NN.
AIML	<ul style="list-style-type: none"> • NLP applications. • AIML is an XML based markup language meant to create artificial intelligent applications. 	<ul style="list-style-type: none"> • Chatbots
Google ML Kit	<ul style="list-style-type: none"> • Optimized for mobile • Easy to use. • Built with google expertise. 	<ul style="list-style-type: none"> • Object detection • Face detection • Pose detection • Selfie segmentation