

TensorFlow:-A Guided Tour(UID-47)

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In this project of TensorFlow , we were introduced to the world of machine learning from scratch including some of basics model such as Linear Regression and Logistic regression . we coded our model using sklearn libraries and then we moved to TensorFlow for further models .

We used Keras API for making various Convolutional Neural Networks used for image classification , fine tuning and transfer learning. First we went through the official documentation of TensorFlow to get familiar with the Keras Library and its functions, and then moved to code it out ourselves.

After covering the basics and getting familiarized with the tools and libraries ,we moved to work on a project of implenting a research paper by slightly modifying it as per our need to make it work better on our data of oxford-iiit-pets.

Implementing the **U-Net** Architecture for Image Segmentation

We went through the official paper of unet transformation and decided to use it for image segmentation on oxford-iiit-pets dataset. We implemented the architecture and modified some of the layers to improve the accuracy of our model.

We finally achieved a test accuracy of 81.93 percent .

```
58/58 [=====] - 35s 611ms/step - loss: 0.4792 - accuracy: 0.8109
Epoch 10/10
58/58 [=====] - 13s 210ms/step - loss: 0.4592 - accuracy: 0.8193
Test Accuracy: 0.8193069100379944
```

Examples:-

