ML Model to Coral Board steps:

1. Preparing the Coral Board

1. **Set Up the Board:**
    a. Flash the latest Mendel OS onto the Coral Dev Board. Follow the official guide: Mendel OS Setup
    b. Connect the board to a power supply and a monitor via HDMI.
    c. Set up SSH access using the command: ssh mendel@<device-ip>
2. **Install Required Libraries:**
    a. sudo apt update
    b. sudo apt install python3-pip
    c. pip3 install --upgrade pip
    d. pip3 install tflite_runtime

For Coral USB Accelerator (Used with Raspberry Pi/PC)

1. **Install Edge TPU Runtime and Libraries:**

- echo "deb https://packages.cloud.google.com/apt coral-edgetpu-stable main" | sudo tee /etc/apt/sources.list.d/coral-edgetpu.list
- curl https://packages.cloud.google.com/apt/doc/apt-key.gpg | sudo apt-key add -
- sudo apt update
- sudo apt install libedgetpu1-std python3-tflite-runtime

2. **Install PyCoral (if needed)**

2. Converting & Deploying the ML Model

1. Convert Your Model to TensorFlow Lite (TFLite) Format: If your model is in Keras or TensorFlow, convert it using the following script

2. **Optimize the Model for Coral TPU (Quantization & Compilation):**

- Use the **Edge TPU compiler** to compile the model:
    - edgetpu_compiler model.tflite
- This will generate a **model_edgetpu.tflite** file optimized for the Coral TPU.

3. **Deploy the Model to the Coral Board:**

- Transfer the compiled .tflite model to the Coral Board using
    - scp model_edgetpu.tflite mendel@<device-ip>:~/

Look at code for following steps.