Steps to Deploy a Model on Microsoft Azure

1. **Create a Microsoft Azure Account**
    - Go to https://azure.microsoft.com and sign up.
    - Provide your personal and payment (card) details if prompted.
2. **Access the Azure Portal**
    - After account creation, go to the Azure Portal.
3. **Create a Virtual Machine**
    - From the dashboard, search for **"Virtual Machines"** in the top search bar.
    - Click on **"Create" → "Azure Virtual Machine"**.
4. **Configure the Virtual Machine**
    - Choose your preferred **region**, **Ubuntu** as the OS, and a size (like Standard B1s for small apps).
    - Under **Administrator Account**, select **SSH public key** and generate a new key pair if needed.
5. **Configure Networking**
    - In the **Networking** tab, add an **inbound port rule** to allow traffic on **port 7080**.
    - For testing purposes, you can allow "All traffic" (not recommended for production environments).
6. **Download SSH Key**
    - Download the private key (.pem or .ppk) if you created a new one.
    - Save it securely in your deployment directory.
7. **Connect to the Virtual Machine**
    - Once the VM is running, go to the **"Connect"** tab.
    - Choose **"SSH"** and look for the **"Native SSH"** option
    - Copy the provided SSH connection command.
    - It will look something like this:
    - e.g : ssh -i azure_key.pem azureuser@<your-vm-ip>

8. **Open Terminal or CMD and Connect**
    - Navigate to the folder containing the .pem file.
    - Run the SSH command to connect:

    ssh -i azure_key.pem azureuser@<your-vm-ip>

    - Type yes if prompted to trust the connection.
9. **Update the VM and Install Required Packages**

    sudo apt update

    sudo apt install python3

    sudo apt install unzip
10. **Upload Your Deployment Files to the VM**

- Use SCP or SFTP to upload the deployment.zip file. Example using SCP:

sftp -i azure_key.pem deployment.zip azureuser@<your-vm-ip>:/home/azureuser/

11. **Unzip and Setup Project**

    unzip deployment.zip

    cd deployment

    ls # Confirm your files are there

    pip install -r requirements.txt

    If you face issues, try:

    pip install -r requirements.txt --break-system-packages
12. **Ensure your Flask App Runs on Port 7080**

- In your main.py, make sure it ends with:

    app.run(host="0.0.0.0", port=7080)
13. **Run Your Flask App**

    python3 main.py
14. **Access Your App in a Browser**

- Use your VM's **public IP** and **port 7080**:

    http://<your-vm-ip>:7080

Example:

http://20.123.45.67:7080

Notes

- To edit a file on the server:

  vi <filename>

  - Press i to enter **INSERT mode**
  - Make your changes
  - Press Esc, then type :wq to **save and exit**