**AWS Deployment Documentation**

**1. Overview**

The Streamlit application, which integrates the deep learning model, was successfully deployed on Amazon Web Services (AWS) using an EC2 instance running Ubuntu. This allows the app to be accessed from any browser using the instance's public IPv4 address.

**2. Steps Followed**

**a. EC2 Instance Setup**

1. Logged into the AWS Management Console.
2. Created an EC2 instance named "ban".
3. Selected Ubuntu OS as the operating system.
4. Generated and downloaded a key pair (.pem file) for secure SSH access.
5. Launched the EC2 instance.

**b. Connecting to the Instance**

1. Copied the Public DNS of the EC2 instance.
2. Opened PuTTY on the local system.
3. Uploaded the previously downloaded key pair in PuTTY.
4. Successfully connected to the Ubuntu environment running on the EC2 instance.

**c. Application Setup**

1. Cloned the GitHub repository containing the Streamlit app and model files: git clone <repo\_url>
2. Created and activated a virtual environment: python3 -m venv venv source venv/bin/activate
3. Installed all dependencies from requirements.txt: pip install -r requirements.txt
4. Started the Streamlit application: streamlit run app.py --server.port 8501 --server.address 0.0.0.0

**d. Security Configuration**

1. Added a custom inbound rule in the AWS EC2 security group. • Port Range: 8501 • Source: Anywhere (0.0.0.0/0) This allowed external users to access the app running on port 8501.

**e. Accessing the Application**

1. Copied the Public IPv4 address of the EC2 instance.
2. Opened a web browser and entered: http://<public-ipv4>:8501
3. The Streamlit application loaded successfully and could be accessed remotely.

**3. Outcome**

The Streamlit deep learning application is now deployed and accessible over the internet using AWS EC2. The setup ensures that the app runs in a secure Ubuntu environment, with all dependencies managed through a virtual environment and accessible via the assigned public IPv4 address.