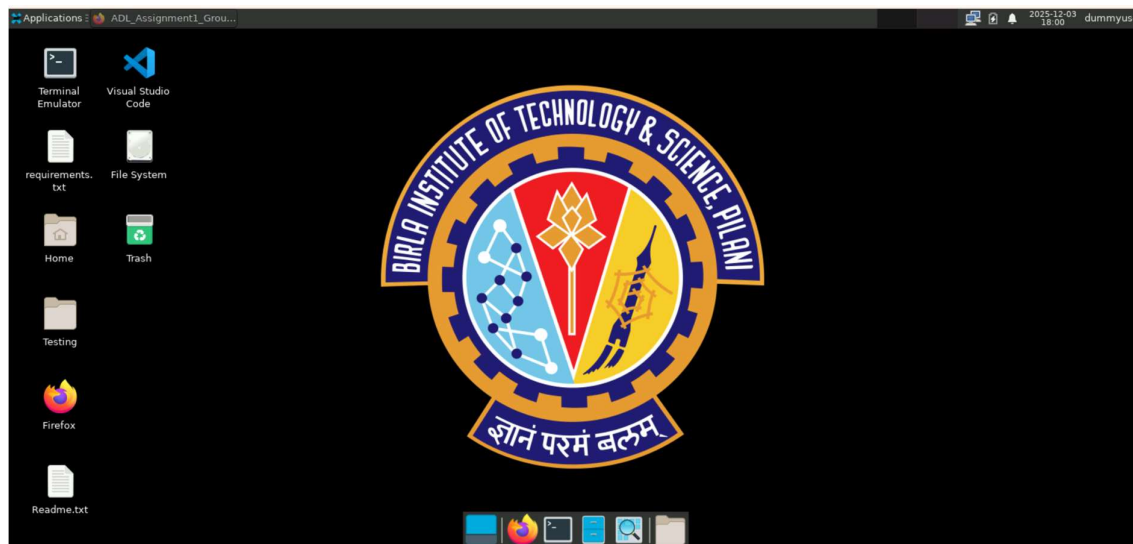
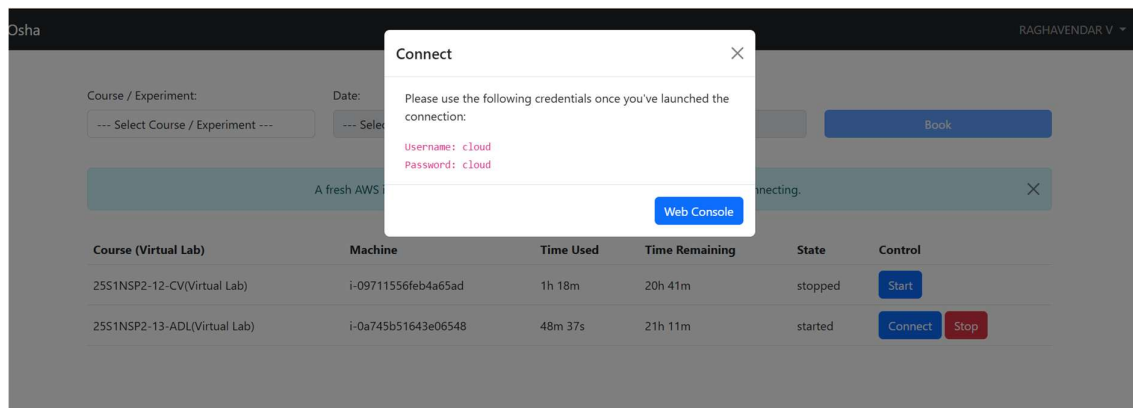


Proof of using virtual Lab (Or attempts to use it)



Applications: ADL_Assignment1_Group... 2025-12-03 18:00 dummyuser

ADL_Assignment1_Group: x +

colab.research.google.com/drive/196m_zVpY4XfNtNjbpKxOOL4tc7cLI5

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ADL_Assignment1_Group130.ipynb ☆

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Advanced Deep Learning - Assignment - 1

Assignment 1 will be set up on Taxila main course page and assigned to the groups once those are finalized. In the mean time, here is the problem statement for Assignment 1.

Make every effort to use the virtual infrastructure set up for the course.

Variables Terminal Python 3

Applications: ADL_Assignment1_Group... 2025-12-03 18:00 dummyuser

ADL_Assignment1_Group: x +

colab.research.google.com/drive/196m_zVpY4XfNtNjbpKxOOL4tc7cLI5

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Convert to grayscale

```
# Convert to grayscale using TensorFlow's built-in function
# .squeeze() removes the channel dimension from (batch, 32, 32, 1) to (batch, 32, 32) instead of above numpy approach
X_train_gray = tf.image.rgb_to_grayscale(X_train_color).numpy().squeeze()
X_test_gray = tf.image.rgb_to_grayscale(X_test_color).numpy().squeeze()

print(f"Grayscale shapes:")
print(f"Training: {X_train_gray.shape}")
print(f"Test : {X_test_gray.shape}")
```

Grayscale shapes:
Training: (50000, 32, 32)
Test : (10000, 32, 32)

Split dataset 70-30 (Random)

```
# Combine all data and resplit 70/30
X_all = np.vstack([X_train_gray, X_test_gray])
```

Variables Terminal Python 3