Neural networks results - PB project

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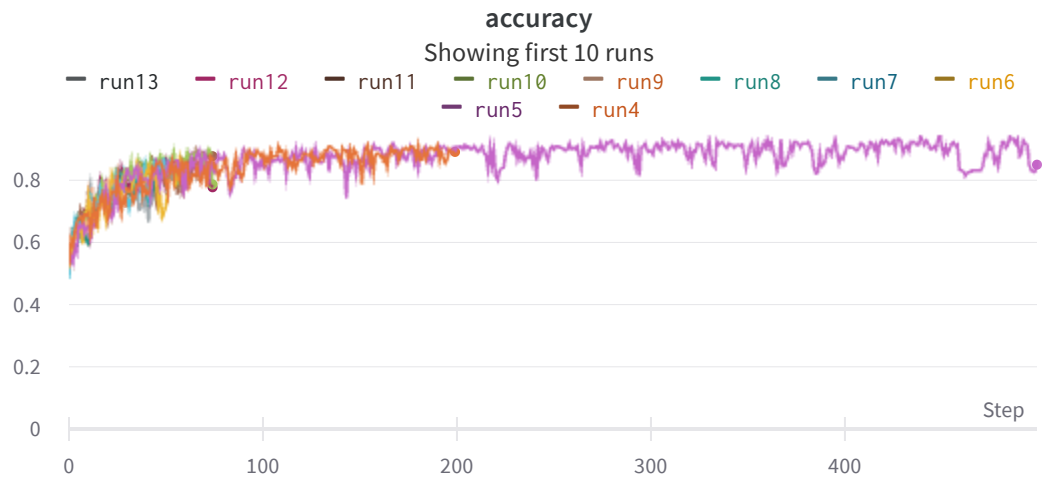
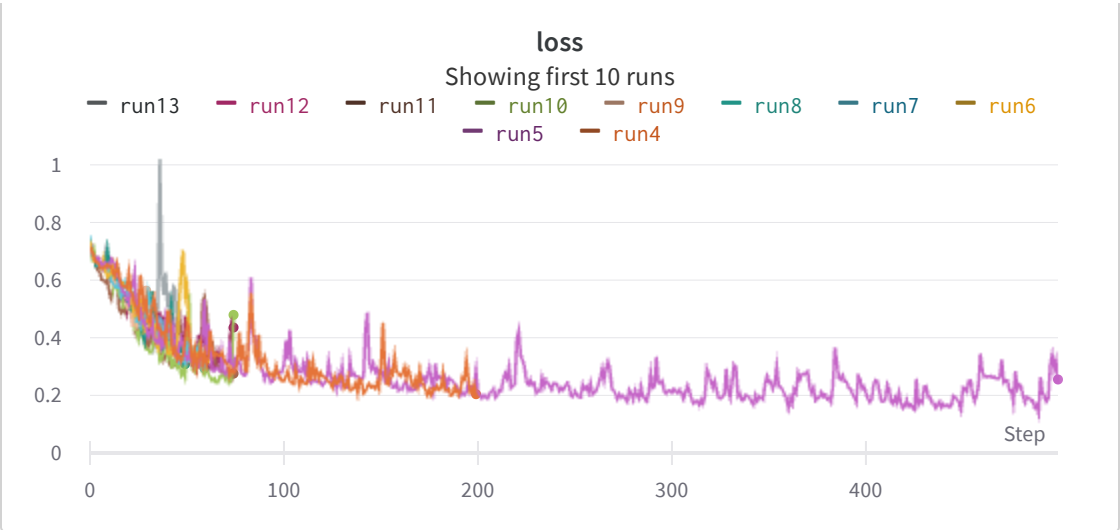
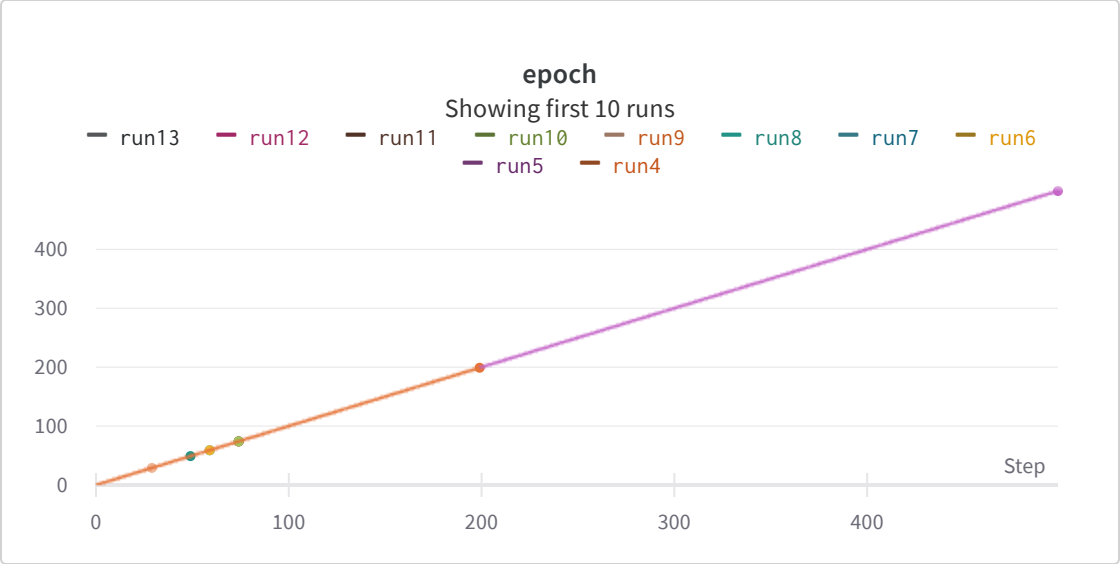
```
pip install wandb
import pandas as pd
import numpy as np
from sklearn.preprocessing import LabelEncoder, StandardScaler
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import Dense

# Load the datasets
train_data = pd.read_csv("/content/drive/MyDrive/colab_files/trainDa
train_labels = pd.read_csv("/content/drive/MyDrive/colab_files/trair
test_data = pd.read_csv("/content/drive/MyDrive/colab_files/valData.
test_labels = pd.read_csv("/content/drive/MyDrive/colab_files/valLab

print("Train data shape:", train_data.shape)
print("Train labels shape:", train_labels.shape)
print("Test data shape:", test_data.shape)
print("Test labels shape:", test_labels.shape)

import wandb
from wandb.keras import WandbCallback

# Encode the labels
label_encoder = LabelEncoder()
train_labels_encoded = label_encoder.fit_transform(train_labels)
test_labels_encoded = label_encoder.transform(test_labels)

# Scale the data
scaler = StandardScaler()
train_data_scaled = scaler.fit_transform(train_data)
```

```
test_data_scaled = scaler.transform(test_data)

# Create a neural network model
model = Sequential()
model.add(Dense(128, activation='relu', input_shape=(train_data_scal
model.add(Dense(64, activation='relu'))
model.add(Dense(32, activation='relu'))
model.add(Dense(1, activation='sigmoid'))

# Compile the model
model.compile(optimizer='adam', loss='binary_crossentropy', metrics=

# Initialize W&B and set up a new run
wandb.init(project='PB', entity='pbproject', name='run13')

# Train the model with WandbCallback
history = model.fit(train_data_scaled, train_labels_encoded, epochs=
                    callbacks=[WandbCallback()])

# Evaluate the model on the test data
test_loss, test_accuracy = model.evaluate(test_data_scaled, test_lab
print("Test Loss:", test_loss)
print("Test Accuracy:", test_accuracy)
```

Section 1







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https://wandb.ai/pbproject/PB/reports/Neural-networks-results-PB-project--Vmlldzo0MzIyODYw