Task: "Build & Judge a Mini AI"

Part 1 — Chronology of AI

Write **one real-world example** for each stage:

Machine Learning → spam detection
Deep Learning → Image Caption Generator
Computer Vision → class Attendance
NLP → Chatbot
LLMs → Chat-gpt

Part 2 — Deep Learning Architectures

Match the model to the use case:

1. **RNN**
2. **LSTM**
3. **CNN**
4. **Transformer**

Use cases:

Image recognition -3
Text translation (old Google Translate) -2
Predicting the next word in ChatGPT- 4
Early speech-to-text systems - 1

Part 3 — Frameworks

Choose one framework (PyTorch / TensorFlow / Keras).
In **one sentence**, explain why you would use it if you were a student making a cat-vs-dog classifier.

I would use keras as it is beginner friendly and highly accurate for small projects.

Part 4 — Evaluation Metrics

Imagine you built a spam filter. Answer:

Precision: If it marks 10 emails as spam and 7 are truly spam → what's Precision?

It is 70 %
Recall: If there were 12 spam emails in total, how many did it catch? (use same example)
It catched 7 mail

F1 Score: Use the formula and calculate (round to 2 decimals). **MSE/MAE:** Predict your friend's age (actual = 15, prediction = 18). Which metric punishes the error more?
Mean Squared Error . it squares up the error on large scale . As MAE is 3 MSE will be 9 . F1
Score- 0.63
BLEU/ROUGE: AI translated "The cat sat on the mat" as "Cat is on the mat." Which metric (BLEU/ROUGE) do you think would give a high score?
ROUGE

Part 5 — Responsible AI & Explainability

You built an AI that predicts loan approvals.
A customer asks, "Why was my loan rejected?"
Write **one simple way** to explain the decision fairly (e.g., "Your income was too low compared to the loan size").

Deliverable: Each trainee should write answers in 5–7 short lines.

Your loan application was reviewed, and the primary factor in the decision was that your income level did not meet the required threshold for the requested loan amount. This assessment considers the overall loan size in relation to your verifiable income, ensuring responsible lending practices. To potentially improve future applications, consider adjusting the loan amount or exploring options to increase your documented income.