Are all 10 questions important to create the sorting hat?
No, some questions are not very specific and have little reference value for house placement.

If you were to remove some questions to improve user experience, which questions would you remove and justify your answer.
I will remove
Q6: "What to do with a mystery book?"
Q7: "Preferred pet?"
Q10: "Dream career?"
These questions are not very specific and have little reference value for house placement.

If you were to improve the sorting hat, what technical improvements would you make?
Confidence Feedback: Add a confidence score after sorting, e.g., “You are most likely a Ravenclaw (82%)”.
Model Compression: Optimize the model using pruning or quantization to reduce memory footprint on the ESP32.

How could you improve the model's accuracy or efficiency?
Larger and better-labeled dataset: Use crowdsourcing or personality-aligned quizzes to gather training data with clearer house traits.
Feature engineering: Instead of treating each question separately, aggregate or encode traits like “risk-taking” or “strategic thinking”.

What additional sensors or hardware could enhance the user experience?
Touch sensors: Replace mechanical buttons for more seamless interaction.
Microphone + Speech Recognition: Let users speak answers for a magical experience.

Does decision tree remain suitable for your choice of new sensors? If yes, carefully justify your answer. If not, what ML model would you use and explain why.
Partially. Decision trees are simple, fast, and interpretable—great for small feature spaces like button inputs. But with high-dimensional inputs like audio, decision trees become weak or overfit.
For speech or motion input: use a Random Forest or Lightweight Neural Network (e.g., quantized MLP via TensorFlow Lite).
For continuous input features (e.g., IMU, voice embeddings), models like k-NN, SVM, or small CNNs are more robust.