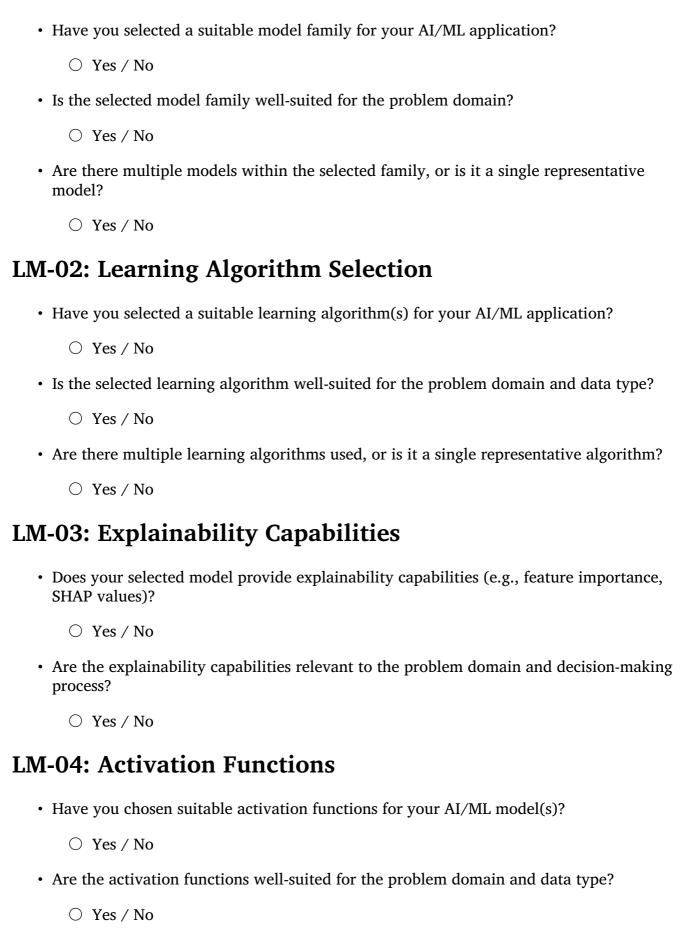Here is the generated checklist in Markdown format:

LM-01: Model Family and Selection

- Have you selected a suitable model family for your AI/ML application?

    ○ Yes / No

- Is the selected model family well-suited for the problem domain?

    ○ Yes / No

- Are there multiple models within the selected family, or is it a single representative model?

    ○ Yes / No

LM-02: Learning Algorithm Selection

- Have you selected a suitable learning algorithm(s) for your AI/ML application?

    ○ Yes / No

- Is the selected learning algorithm well-suited for the problem domain and data type?

    ○ Yes / No

- Are there multiple learning algorithms used, or is it a single representative algorithm?

    ○ Yes / No

LM-03: Explainability Capabilities

- Does your selected model provide explainability capabilities (e.g., feature importance, SHAP values)?

    ○ Yes / No

- Are the explainability capabilities relevant to the problem domain and decision-making process?

    ○ Yes / No

LM-04: Activation Functions

- Have you chosen suitable activation functions for your AI/ML model(s)?

    ○ Yes / No

- Are the activation functions well-suited for the problem domain and data type?

    ○ Yes / No

LM-05: Cost/Loss Function Selection

- Have you selected a suitable cost/loss function for your AI/ML application?

  ○ Yes / No

- Is the selected cost/loss function relevant to the performance metrics and decision-making process?

  ○ Yes / No

LM-06: Model Bias and Variance Metrics

- Have you quantified the model bias and variance metrics (e.g., mean squared error, R-squared)?

  ○ Yes / No

- Are the model bias and variance metrics acceptable for your AI/ML application?

  ○ Yes / No

LM-07: Model Robustness and Stability

- Have you assessed the robustness and stability of your AI/ML model(s) to different inputs, noise, and outliers?

  ○ Yes / No

- Are the model robustness and stability metrics acceptable for your AI/ML application?

  ○ Yes / No

LM-08: Training Environment

- Have you identified a suitable training environment (hardware and software) for your AI/ML application?

  ○ Yes / No

- Is the training environment well-suited for the problem domain and data type?

  ○ Yes / No

LM-09: Model Parameters Initialization Strategy

- Have you chosen a suitable model parameters initialization strategy (e.g., random, k-means)?

  ○ Yes / No

- Is the initialization strategy relevant to the problem domain and decision-making

process?

○ Yes / No

LM-10: Hyperparameters Identification and Setting

- Have you identified and set hyperparameters for your AI/ML model(s)?

    ○ Yes / No

- Are the hyperparameters well-suited for the problem domain and data type?

    ○ Yes / No

LM-11: Expected Performance with Training, Validation, and Test Sets

- Have you evaluated the expected performance of your AI/ML model(s) on training, validation, and test sets?

    ○ Yes / No

- Are the expected performances acceptable for your AI/ML application?

    ○ Yes / No

LM-12: Model Verification and Validation

- Have you verified and validated your trained AI/ML model(s)?

    ○ Yes / No

- Is the verification process well-suited for the problem domain and decision-making process?

    ○ Yes / No