Project Methodology

1. Project Overview:
   - Provide a brief description of the project, explaining the importance of integrating AI model into edge computing for various applications.
   - Define the work area, objectives, focus and goals, including the specific AI model.
   - Define on tools and equipment needed for the project.

2. Literature Review:
   - Conduct a comprehensive review of existing research and literature related to AI integration in edge computing. Identify relevant technologies, methodologies, and best practices.
   - Conduct comprehensive research on AI model that is open source.

3. Edge computing infrastructure setup:
   - Detail the setup of the edge computing infrastructure, including hardware and software components. Discuss the choice of edge devices – STM32MP157C discovery kit.
   - Describe the techniques used to optimize the AI model for deployment at the edge, considering factors like model size, latency and resource constraints.
   - Explain the process of integrating the trained AI model(s) with edge devices. Discuss compatibility, deployment mechanisms, and communication protocols.
   - Discuss the selection and configuration of middleware or frameworks for managing AI at the edge. This may include platforms like TensorFlow Lite or edge-specific solutions like Intel OpenVINO.

4. Testing and Validation:
   - Outline the testing procedures, including unit testing, integration testing, and performance testing, to ensure the AI model works correctly within the edge computing environment.
   - Address security and privacy concerns by implementing encryption, access controls, and other relevant measures to protect data and AI models at the edge.
   - Describe the setup for monitoring the deployed AI model(s) in real-time. Discuss strategies for model updates, maintenance, and error handling.
   - Evaluate the performance of the integrated AI model(s) in terms of speed, accuracy, and resource utilization. Compare the results against predefined benchmarks.