9. Technical Solution

SG1: Product or product-component solutions are selected from alternative solutions.

**SP1.1 Develop detailed alternative solutions and selection criteria.**

**SP1.2 Evolve the operational concept, scenarios, and environments to describe the conditions, operating modes, and operating states specific to each product component.**。

**SP 1.3 Select the product-component solutions that best satisfy the criteria established.**

Although the scheme of this project is relatively clear, we should not think that we do not need to consider multiple design schemes. Such an idea is very lazy and will cause great risks. We still need to find candidate solutions and find the best solution based on selection criteria. In this project, a variety of neural networks can be used. When the neural network we choose is not good enough, there should be alternatives. In addition, we use python to encode, but we can also use alternative Matlab when python shows obvious disadvantages.

SG2 Product or product-components designs are developed.。

Once the best candidate is determined, specific design work can begin. SG2 means to establish and maintain a set of standards for managing all design documents and data, and to effectively manage the data and documents in the design process. Then, based on this standard, design the appropriate product components and determine which components need to be changed.。

SG3: Product components, and associated support documentation, are implemented from their designs.

In SG3, we can perform coding activities according to the design, and develop and maintain user documentation. The effect of the design in SG2 needs to be reflected in the specific coding. During the encoding process, we can judge whether the original scheme is good enough and decide whether to use alternatives, for example, to try another neural network. When coding, we should also adjust the previous design.