In this section, the methodology of this research will be presented, we divided the methodology into two stages: “The TRIZ stage” and “The optimization stage”. In the first stage, a contradiction matrix will be constructed, and the inventive principles will then be revealed. After that, we came up with some possible solutions based on the inventive principles received. In the second stage, we demonstrated the mathematical model and the process of implementation of the machine learning method.

3.1 The TRIZ stage

3.1.1 Contradiction matrix and inventive principles

3.1.2 Transfer inventive principles to specific solutions

3.2 The optimization stage