Nadjiha, Hadjidj & Benbrahim, Meriem & Tarek, Berghout & Mouss, Leila & Mouss, Hayet. (2021). A Comparative Study between a Data-Based Approaches Under Earlier Failure Detection. A comparative study between a set of chosen machine learning tools for direct remaining useful life prediction is presented in this work. The main objective of this study is to select the appropriate prediction tool for health estimation of aircraft engines for future uses. The training algorithms are evaluated using "time-varying" data retrieved from C-MAPSS (Commercial Modular Aero-Propulsion System Simulation) developed by NASA. The training and testing processes of each algorithm are carried out under the same circumstances using the similar initial condition and evaluation sets. The results prove that among the studied training tools, SVM (Support Vector Machine) achieved the best results.