Review of: "Optimized Material Removal and Tool Wear Rates in Milling API 5ST TS-90 Alloy: AI-Driven Optimization and Modelling with ANN, ANFIS, and RSM"

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Potential competing interests: No potential competing interests to declare.

An excellent paper, the authors examined different predictive modelling tools to predict the performance of drilling tools. The paper is extremely timely with the integration of AI within experimental campaigns becoming increasingly more prevalent, understanding how AI can be used within environment with smaller datasets is of increasing importance. The authors were able to determine the optimum operating conditions key operating parameters (spindle speed, feed rate and depth of cut) on the key performance indicators (material removal rate and tool wear rate).

I have the following recommendations for this paper :

1. A detailed and comprehensive literature review comparing different studies done. From the literature review the authors should then outline why the research contributes to the existing literature.
2. Within the introduction the predictive modelling techniques (ANN, ANFIS and RSM) should be further discussed.
3. Within section 3 the authors need to further compare the predictive modelling techniques, there needs to be a further discussion of why these techniques produce the results they do.
4. The ANN predictive model, a principal component analysis can be done on the inputs to determine each inputs weighting on the output.
5. Justification of why AI can be used on a smaller dataset.