Anami, B. S., Mainalli, K., Kallur, S., & Patil, V. (2022). A machine learning based approach for wine quality prediction. *2022 2nd Asian Conference on Innovation in Technology (ASIANCON)*.

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In 2022, Anami et al. explore a machine learning approach for predicting wine quality using a paper entitled A machine learning-based approach for wine quality prediction. This research paper became a meaningful addition to the literature on wine quality evaluation and was delivered at the 2022 Second Asian Conference on New Technologies and Updates.

The authors employed a data set composed of 6497 red and white wines which carried 12 diverse characteristics viz. fixed acidity, volatile acidity, citric acid, residual sugar, chlorides, free sulfur dioxide, and total sulfur dioxide They enabled the development of predictive models of wine quality.

The authors applied several machine learning methods including decision trees, random forest, and SVM to identify which produced the best prediction results. Comparing their results, the SVM had a surprising level of accuracy at 70.5% as compared to other methods. The fact that SVM was able to predict such a high degree of accuracy further indicates its potency as a key instrument in wine quality forecasting.

Practically, this paper will have implications for the wine-making world out there. Machine learning will improve the quality of wines through data-driven insights for winemakers. They will have a positive impact on future decisions concerning grape growing as well as the fermentation process and blending to enhance wine quality.

Overall, it makes a convincing argument for machine learning applied to the wine business. These results demonstrate that they can use model-data-based optimization approaches for improving wine quality which benefits both wine makers as well as enthusiasts.