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Editorial

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This issue presents two papers. The first paper presents a new methodology for CPU scheduling is an important component of modern operating systems. The authors effectively enhanced the efficiency of the MLFQ scheduler by applying SMOreg, Support Vector Machines and Random Tree classification methods to approximate the time slice required for each queue. The methodology utilizes two feature selection methods, Relief-F and Information gain, as well as three classification methods, SMOreg, Support Vector Machines and Random Tree, to approximately calculate the time slice required for each queue in the Multilevel Feedback Queue system. The author utilizes three artificial datasets, while performing several experiments, and presenting the results for the three artificial datasets. The authors performed several experiments to compare the new methodology with the MLFQ scheduling discipline using different datasets [1].

The second paper, discuss a lubricant testing that requires a post-test examination of specimens to obtain the desired critical measurement. The paper presents advanced analysis methods aids to develop higher-performing products with the improved insight into the lubricants' performance. The paper discuss extended the use of Computer Vision and Machine learning methods into the lubricant testing realm while minimizing defects to protect the bearing's surface. While large-scale defects are easy to interpret, it becomes difficult to differentiate between test results when comparing bearing examples with less apparent defects. The paper present consistent, granular analyses of tests that can help lubricant development withstand stringent requirements. R-Mask CNN methods provide an option to apply instance segmentation techniques to classify areas of interest, allowing for an image with multiple instances of these defects. Since big data is the fuel for a system like this, there are certain limitations regarding the number of examples for lubricant bearing surface defect data. Leveraging data amplification techniques allows for a synthetic 'big' data set to accommodate the model's needs. This paper lays out how these tools work synergistically to provide a model that can operationalize for a company sooner than waiting to generate a complete set of ideal data.

References

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