Predictive Maintenance in Mining with MATLAB

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ABSTRACT

Performing detailed analysis on large amounts of data has moved out of the realm of research into the world of operation and planning. Mining companies are faced with large amount of data that can be turned into valuable information by using the power of technical computing. Prediction of degradation or failure of equipment is the focus of attention in this presentation, illustrating how MathWorks has helped mining companies around Australia reduce uncertainty in their maintenance and operation schedules.

Success in creation of predictive models requires understanding of the underlying mining operation or equipment. The workflow presented shows how to use apps to analyse data, extract key features for failure prediction and develop models using a background in plant operation without the need to learn an additional engineering field (data science).

In the Iron Ore industry alone engineers have used MATLAB for predicting plant state-of-health, predicting maintenance degradation and failures on rail-stock, logistic statistical analysis, machine learning, plant optimisation, plant design and many other applications.