



TECHENOMICS INTERNATIONAL

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Press Release

Implementing AI into Techenomics fluid management

'Your Partner in Lubrication Reliability'

'Supporting Engineering Excellence, One Sample at a Time', Techenomics International is progressively integrating Artificial Intelligence (AI) into its total fluid management solutions assisting operators improve efficiency with engines and mechanical equipment thus enhancing productivity while achieving cost savings.

Techenomics CEO Chris Adsett said the company believed AI would enable it to improve predictive maintenance capabilities, reduce equipment downtime, provide more valuable insights to clients and in a greatly reduced amount of time.

Integrating AI into Techenomics' oil and fuel analysis services involves several key steps.



CHRIS ADSETT
CEO OF TECHENOMICS



Data collection and management

Centralise data: Ensure all historical sample results, equipment details and operational data are stored in a centralised database in standardised formats to make it easier for AI models to process the information.

Clean data: Remove any noise or irrelevant data and annotate the dataset for clarity, especially for anomalies or notable wear patterns.

Feature engineering: Identify and create relevant features from the raw data that could improve model performance, such as operating hours, temperature and oil condition metrics.

Model development

Choose AI techniques: Select appropriate machine learning and statistical methods, such as regression analysis for wear predictions, classification algorithms for anomaly detection or time-series analysis for monitoring trends.

Training and validation: Split the dataset into training and validation sets to train the models and evaluate their accuracy.

Integration: Develop application programming interfaces (APIs) to integrate AI models with the existing Blue Oceans software system used for data analysis and client reporting while maintaining a user-friendly interface where clients can access insights, predictions and reports easily.

Real-time monitoring

IoT sensors: Implement IoT sensors on vehicles to collect real-time data on oil conditions and other critical parameters.

Streaming Analytics: Use streaming data analytics to process incoming data in real time, allowing for immediate insights and alerts.

Continuous improvement

Feedback loop: Establish a feedback loop where client outcomes (eg, actual failures vs predictions) are used to retrain and refine AI models.

Performance monitoring: Continuously monitor the performance of AI models and make adjustments as needed to ensure accuracy and reliability.

Collaboration

Collaborate with experts: Partner with data scientists, AI specialists or academic institutions to stay updated on the latest AI techniques and methodologies.

Industry best practices: Keep abreast of industry trends and best practices to continually enhance the AI implementation strategy.

“By following these steps, Techenomics will implement AI into its services in an effective manner, enhancing predictive capabilities and providing greater value to clients,” Chris Adsett added.



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