

Development of KPI (Key Performance Indicator) for Mining Sector

Faculty advisor: Prof. Chi-Guhn Lee

Though mining and primary resource extraction is a well-established industry, it has struggled to stay up to date with emerging technologies, specifically with respect to equipment maintenance and asset management.

The mining and primary resource extraction sector is an extremely asset-intensive industry, where the continuous and reliable operation of large physical equipment is a key part of revenue generating activities. In order to evaluate their equipment performance, various metrics called key performance indicators (KPIs) are used. However, there are two key gaps that can be addressed:

- The library of KPIs has not kept up with data that has become increasingly available through digitization. There are opportunities for more nuanced and responsive KPIs to be developed using information that is newly available and not currently used.
- The KPIs are often compared against “rules of thumb” that are better suited to manufacturing contexts. Their appropriateness for mining has not been verified.

The objective of this project is to develop one or more new KPIs that are improvements upon existing KPIs, and to validate or revise current rules of thumb for the mining sector.

The successful candidate will have a strong background in statistics, some experience programming, and confidence in working with industry professionals.

Contact: Prof. Lee, cglee@mie.utoronto.ca