THE DRIVE TO AUTOMATE TRUCKING
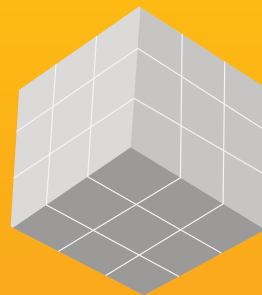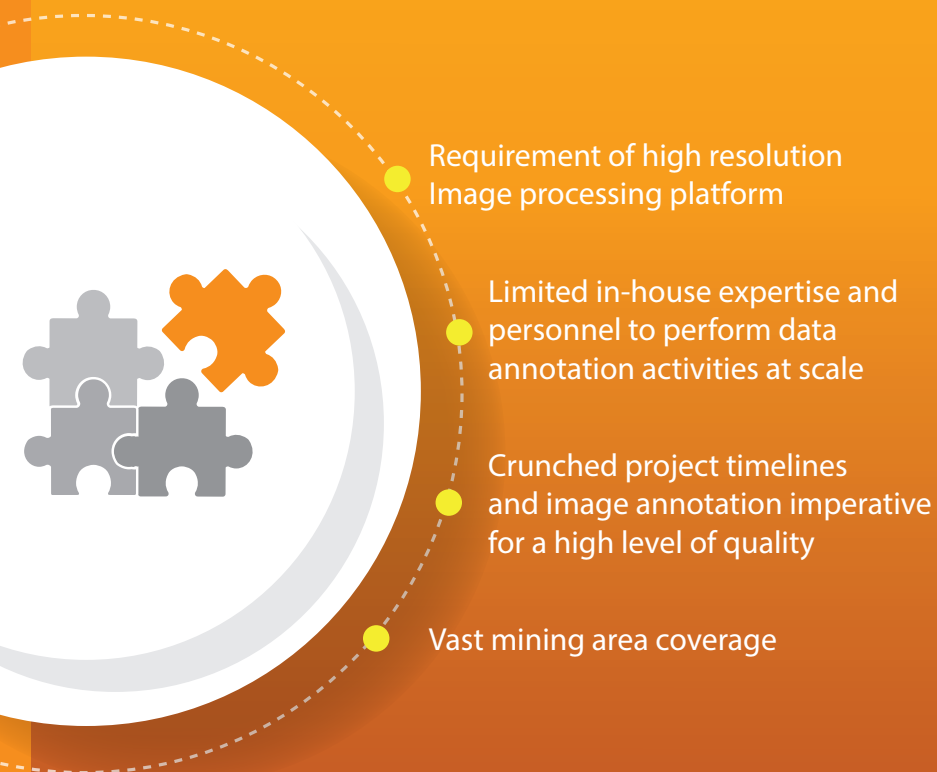
Annotating thousands of images for a machine learning model, at rapid scale.

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The client is a global leading mining and resources company.

CHALLENGES

The client wanted to deploy autonomous trucks in its mines. Towards this end, they needed to create a training dataset for their machine learning model, but faced the following challenges:

- Requirement of high resolution Image processing platform

- Limited in-house expertise and personnel to perform data annotation activities at scale

- Crunched project timelines and image annotation imperative for a high level of quality

- Vast mining area coverage

SOLUTIONS

Infosys BPM deployed a geographic information system (GIS) team consisting of experienced and expert annotators who:

- Collaborated with a data annotation platform partner using a hybrid model for streamlined execution

- Designed and developed annotation guideline to accommodate client customization

- Followed an implement > learn > refine process methodology

- Identified and extracted multiple scenario and key features

- Performed annotations using client-defined class categories and specifications

- Utilized the partner's automation platform to significantly enhance the efficiency and quality of the annotations

- Validated completeness and correctness of annotated images

- Leveraged a 2-tier quality approach to ensure final deliverables to highest quality

BENEFITS

The Infosys BPM team's GIS domain expertise enabled several successful outcomes for the client that included:

- A machine learning approach for image classification

- Adherence to the client's category definitions, annotation specifications, quality targets

- An enhanced machine learning model for autonomous trucks to detect objects and constructions in real time

10000
Aerial Images annotated

>99.5%
Quality Labeling of mine objects

100%
Adherence to delivery timelines

20%
Savings due to in-house QC

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