

CASE STUDY

Machine learning uncovers key insights for snow removal

THE CHALLENGE

When it snows, our cities, highways and towns rely on snow removal equipment to quickly clear the roads and sidewalks. Operators of these vehicles work day and night and depend on special equipment to allow them to do their job quickly and effectively.

Our client, a major manufacturer of snowplow and snow spreader equipment, was looking to develop a comprehensive list of these equipment operators' wants, needs, opinions and insights related to snow removal. They were looking to use these insights to spur innovation and strengthen their marketing. While they had done primary research in the past, they weren't sure they had uncovered all possible needs in the category.

WHAT WE DID

AMS used machine learning to mine online communities where snow equipment operators talk about the products they use and the snow removal process. On these forums, community members rely on each other to answer questions, troubleshoot issues, and provide general advice. These forums are full of rich insights as oftentimes operators post about their experience right after key moments of truth – e.g., when there is an equipment failure in the middle of a large storm.

We gathered a large dataset of more than 20K sentences related to snow removal. After compiling the dataset, we trained the machine learning algorithm to distinguish informative content, that which provided insights into customer wants and needs, from uninformative content that did not. Next, we ran the algorithm. In a matter of minutes, the machine assessed all the records of data and uncovered 1,600 statements that the machine believed contained unique customer insights related to the category. Trained AMS analysts then reviewed these statements and formulated a comprehensive list of the operators' wants and needs, quickly and cost effectively.

THE OUTCOME

In total we identified 107 unique customer needs. The needs covered a variety of areas including the lights on the vehicles, the challenges of removing snow from sidewalks, de-icing, maneuverability, and much more. The database of needs identified was detailed and actionable.

Ultimately, our research enabled the manufacturer to quickly (within 3-4 weeks) and inexpensively develop a detailed view of the entire category. Through this process, our client became an advocate for the machine learning methodology. According to him, the machine's ability to identify known and new insights "increases both [his] confidence in the validity but also the value" of machine learning.

Interested in learning more? Our client spoke about his experience with machine learning during a recent webinar: <https://ams-insights.com/our-latest-thinking/webinars-on-demand/machine-learning-uncovering-transformational-insights/>

CLIENT

Leading manufacturer of snow plows and snow spreaders

INDUSTRY

Heavy Equipment

SERVICES

Machine Learning

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