



FROM THE FIELD NOTES BLOG

The 3-Minute Guide to AI for Field Service



Artificial intelligence (AI) is one of those buzzwords that can be used to mean just about anything involving data, software, and problem solving – and sometimes winds up meaning nothing at all.

In part, that's because different people have wildly different expectations for AI. If your definition of AI involves computer-based discovery of novel insights and creative ideas – what specialists sometimes call “artificial general intelligence” or “full AI” – then you might conclude that today's applications of AI don't live up to your expectations.

But in industrial and commercial applications, the term “AI” is generally used to describe problem-solving techniques that are both real and readily available. And many of these techniques have proven to be extremely valuable when applied to some of the most common field service challenges.

That value often results from processing the wealth of data generated by field service operations and by the systems being installed, maintained, and repaired. AI can zero in on useful patterns in that data that can ultimately augment human decision making. That leads to improved outcomes and can also boost job satisfaction among field service teams who are able to focus their time on tasks that make better use of their experience and expertise.

Like many complex disciplines, it's often easier to understand a particular sub-discipline rather than the whole shebang. Few people would claim to have a deep understanding of all of biology, for example, but many people have a robust understanding of, say, the heart and the circulatory system.

Here's how these can be applied to improve field service operations.

Computer Vision

It shouldn't be surprising that AI techniques related to visual imagery are one of the most prevalent applications of AI. After all, more than half of the cortex – the part of the brain where most intelligence happens – is involved in helping humans understand what their eyes are seeing.

Computer vision techniques are used to automate the analysis of photographic imagery. These images could be people, equipment, or a part that's just been installed, and the application might be identifying who is in a photo, what equipment is involved, or whether a part has been installed properly.

Video Analysis

Your brain analyzes moving images differently than the way it analyzes still images. In fact, understanding moving images can involve predicting the future state of the objects that are moving. That makes it possible for you to hit a baseball being pitched at you faster than your brain can process the moving images – you're basically seeing the future trajectory of where the ball is going to be, rather than where it is right now.

Likewise, analyzing video images is different from analyzing still images, and is used to tackle different types of problems in your field operations. For example, video analysis might assess the status of moving parts involved in some kind of process. Sometimes video analysis can involve a combination of expert technicians diagnosing a situation remotely coupled with an AI application also reviewing the application.

Machine Learning

If the way human intelligence is able to understand moving images involves peering into the future, you could think of machine learning as being similar to the ways human intelligence is able to learn from the past.

According to one analysis, the human brain consumes – or is at least exposed to – about [74 GB](#) of data every day. How much data is that? About 16 feature-length movies' worth. It's also about the same amount of data that the typical human would have consumed in their entire lifespan just a few centuries ago.

While most of that data is basically just noise (TV shows about Kardashians, slides from your second cousin's children's trip to Akron, the handouts from your company's latest all-hands meeting), at least some of it can be important. If you see what happens to someone who eats a poison mushroom, for example, it's important to learn from it. (The same goes if you see what happens to people who ignore the handouts at staff meetings.)

Machine learning involves first figuring out which data is important, and then figuring out what the important data can tell you. Given the vast amounts of data available to analyze, machine learning can be a valuable tool to help provide real-time recommendations and drive continuous improvements in processes and workflows, while also freeing up more time for field service teams to focus on higher-value tasks.

To find out more about how Zinier leverages AI technology in our field service automation solutions, you can request a demo [here](#).

Contact us

hello@zinier.com | www.zinier.com

