

CASE STUDY

Disruptive Technologies and Tech Trends in AI and ML for Automation

The Client is an F500 manufacturing company with a diverse portfolio of services in the field of automating processes.



The Challenge:

The Client came to PreScouter to understand the disruptive technologies and technology trends in artificial intelligence (AI) and machine learning (ML) automation and specifically to gain insights into the current state-of-the-art AI/ML technologies and algorithms. In addition, the Client also wanted to grasp what the bottlenecks and challenges of the industry are and what the solutions would be, such as embedded hardware or self-learning techniques.



Methodology:

For this project, PreScouter put together a research team composed of Advanced Degree Researchers (ADRs) with expertise in the areas of AI, ML, and automation. PreScouter recruited a Subject Matter Expert (SME) with industry experience in the last round to provide overview as well as in-depth insights. During the project, the team performed a sequential research process that studied the AI/ML technologies from industry and academia that could potentially or are already being applied to automation.



Methodology (cont):

First, PreScouter landscaped AI/ML technology in automation by looking at companies and startups providing relevant products and services. With information collected from publicly available resources, PreScouter and the Client selected those that were the most promising and conducted more research into neuromorphic computing and low-power consumption solutions.

Next, PreScouter identified the disruptive technologies in automation emerging from academia. By surfacing a handful of technology advances in various categories of ML methodologies, PreScouter then conducted an in-depth study and evaluation of all the examined technologies and provided an insight overview of the available AI/ML techs for the automation landscape.



Results:

PreScouter provided the Client a total of 4 deliverables, including 3 on AI/ML technology advances in automation and 1 on the in-depth investigation headed up by the SME. The technology solutions were further segmented into software solutions and hardware solutions. For software solutions, a total of 17 companies and 18 research papers from academia were identified and analyzed. For hardware solutions, a total of 7 companies and 1 research paper from academia were analyzed.

PreScouter identified 3 major bottlenecks to the development of AI/ML technologies for automation and 4 potential solutions in the near future to the Client.

In the end, PreScouter recommended a strategy for taking advantage of future trends in AI/ML and provided a list of promising technologies for adoption in order to expand and improve the Client's product solutions.

The methodology and results of PreScouter's work with the Client are summarized in the schematic on the following page.

PHASE I

PreScouter investigated relevant AI/ML companies & startups to find:

17 Software Companies & **7** Hardware Companies



MORE RESEARCH INTO NEUROMORPHIC COMPUTING & LOW-POWER CONSUMPTION SOLUTIONS

PHASE II

PreScouter investigated disruptive automation tech emerging from academia to find:

18 Research papers on Software & **1** Research paper on Hardware



3 DELIVERABLES ON AI/ML TECH ADVANCES IN AUTOMATION

PHASE III

PreScouter ADRs + SME conducted an in-depth study and evaluation of the technologies



1 DELIVERABLE PROVIDING AN INSIGHT OVERVIEW OF AVAILABLE AI/ML TECHS FOR AUTOMATION



Impact of PreScouter work

This engagement allowed the Client to quickly view the state of the art in AI/ML and IoT technology, providing them with in-depth knowledge of these technologies from industry and academia. This work also highlighted the trending, the bottlenecks, and the promising solutions of AI/ML for automation, allowing the Client to better shape their product strategies in the future.

Clients Rely On Prescouter For

✓ COMPETITIVE INTELLIGENCE

✓ TECHNOLOGY & PATENT LANDSCAPING

✓ TECHNOLOGY ROADMAPING

✓ MARKET RESEARCH & ANALYSIS

✓ TRENDS MAPPING

✓ REVIEW BEST PRACTICES

✓ PATENT COMMERCIALIZATION STRATEGY

✓ DATA ANALYSIS & RECOMMENDATIONS

✓ ACQUIRE NON-PUBLIC INFORMATION

✓ SUPPLIER OUTREACH & ANALYSIS

✓ CONSULT WITH INDUSTRY SUBJECT MATTER EXPERTS

✓ INTERVIEWING COMPANIES & EXPERTS



Explore how PreScouter can help solve your innovation challenges. Contact us [here](#) or email us at solutions@prescouter.com directly.

500+
CLIENTS
WORLDWIDE

4000+
RESEARCH
REPORTS CREATED

150,000+
HOURS OF RESEARCH
COMPLETED FOR CLIENTS

RioTinto


AGNICO EAGLE


EMERSON

 AngloAmerican

TOSHIBA
Leading Innovation >>>


DOW

 **AKSteel**

 **Amkor**
Technology

 **Lhoist**


Mosaic

 **APPLIED**
MATERIALS


e-on