



Machine Learning: Researching a new tomorrow for air cargo

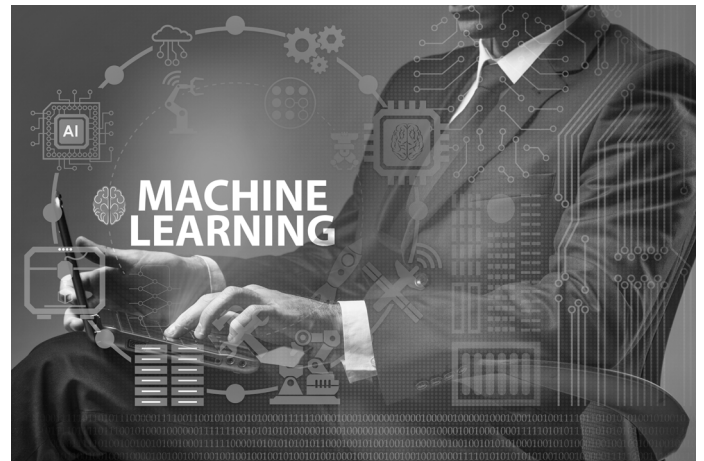
Lucas Fernandez - Head of Innovation

Data can unlock unseen potentials for organizations big and small. Some of CHAMP's data insights services already provide essential information to unlocked insights from our customers' present data lake. Powered by algorithms - simply mathematical equations that compute vast amounts of data - this technology can actually help systems "learn" patterns, and even forecast future ones. "Machine learning", as it is often referred to, has expanded to everything from reading radiography and x-rays in the medical field more accurately than doctors, to allowing Google to provide the gold-standard of automatic language translation, and even helping Amazon predict where and when the demands for specific goods will spike. How can we make use of such predictive technology in air cargo?

CHAMP Cargosystems' innovation team has been exploring machine learning to support the air cargo supply chain and its stakeholders. One such technology includes Natural Language Understanding, which automatically enables systems to understand what customers request by mail, text, or voice to process the query. These technologies are already used by many B2C businesses, including some passenger airlines, to streamline the customer service process, refining workflows based on the nature of the enquiry. CHAMP is similarly developing such a service for a CHAMP customer. For cargo applications, machine learning can reduce the time required to respond to inquiries and streamline the customer services process.

CHAMP foresees many new applications for machine learning in the air cargo supply chain. We expect many elements to overlap with technologies already in use by carriers today, such as predictive pricing. There are many potential uses in operations, particularly in three key areas: anomaly detection to improve quality, document processing to speed up handling in the warehouse, and computer vision to help automation.

Recently, CHAMP teamed up with various cutting-edge startups, such as Tryolabs, which have expertise in the supply chain industry related to transportation and manufacturing. The future possibilities are endless, from automated dynamic pricing to shipment efficiencies and route planning. Moreover, the purpose of such a partnership is to work in tandem with CHAMP and its community for an extensive series of use cases that will inspire new features and products.



Once this series of use cases has been recognized, any member of CHAMP's community is welcome to participate in an assessment workshop to share their perspective of what benefits each use case could bring to their respective organizations. If you are interested in participating, please contact your sales representative to organize a call with the CHAMP Innovation team.



We are committed to the future of this technology and continue to incorporate machine learning elements in products. We are not the only ones, as the number of startups in the field grows every year. Similarly, cloud-based giants like Google, Amazon, and Microsoft continue to invest heavily in these technologies. Other companies like Wiremind have also invested to develop them for cargo specifically.