Article

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 Open Exchange

Should we use computers?

The titular question was quite relevant and often discussed some thirty years ago. The thought went: " Sure, there are industries where computers are the norm, but in my industry we got just fine so far, the benefits are questionable, problems innumerable and unsolved. Can we continue as before or should we embrace this new technology?"

Today, everyone asks the same question but about Machine Learning and Artificial Intelligence. The doubts are the same – lack of expertise, lack of known path, perceived irrelevancy to the industry.

Yet, as before, the correct, even the only possible answer is a resounding yes. Read on to find out why.

It will revolutionize how we work.

1. AI/ML models allow for **personalization at scale**. Want to tailor your marketing campaigns to each individual? No problem! Running predictive maintenance on all devices accounting for minutiae differences in them? Sure. Computational resources required to not only calculate, but also apply predictive models in a transactional, real-time environment cost significantly less these days, making them a reasonable and easy choice for a wide variety of use cases.
2. **Automate routines** and **make decisions fast**. AI models can handle decision-making. With the increasing complexity of models, decisions made based on them are proving to be more and more comparable to expert decisions, even surpassing them in some fields and situations. Employees in all levels of the organizational chart need to make decisions – small and big. Leveraging AI capabilities allows us to spend less time on routine tasks and small decisions, which empowers us to use our time more efficiently and focus on bigger decisions.
3. **Predict the future**. Solve logistical challenges before they arise by calculating future material, time, and workforce requirements and act on the information in real time. Predict trends and develop your high-level strategy plan with them in mind. Investigate possible trends and scenarios based on the already existing information.

It's constantly evolving.

1. **Ease of use**. While we currently do not have completely GUI-based AI/ML tools, the same progress we saw with many other computer technologies – most notably BI tools, from writing code to utilizing frameworks and GUI-based, configurable solutions—is seen with AI/ML tools. We are already past the point of writing code and are currently utilizing frameworks to configure and calculate the models. These advances in technology make it easier for both individuals and companies to get into data science.
2. **Orchestration**. Building a good model is only half the task. Integrating it into a high-load transactional production environment can be no less challenging. We can even see it in the disparity between models and ideas described in academic papers and AI/ML tools that actually enjoy widespread use. Our own InterSystems IRIS interoperability capabilities can help you with this task by automating model deployment, monitoring model performance, and even retraining the model as needed, all tightly integrated with transactional processing allowing you to build intelligent business processes that run faster and smarter than ever.
3. **Cloud**. Running AI/ML workloads is easier than ever in the cloud. More importantly, we can consume only the resources we need. Moreover, with the massive parallelization offered by cloud platforms, we can save

on time to a working solution. In addition, today's AI/ML models can fully scale with you and your infrastructure. Adding more servers solves speed and time problems because new algorithms can fully utilize all the resources available to them. We are not bound to a single process or even a single server. Spawn hundreds of commodity servers for a timeframe you need them and automatically scale the cluster based on the workload.

4. **Use of unstructured data.** A recent trend is the commercialized ability to use AI/ML models with audio, video and unstructured texts. For example, you can automate customer identification from video feeds or monitor patient health using IoT devices and the real-time audio-visual data they produce. New algorithms and models allow for that and much more, therefore utilizing all the enterprise data you have collected. Dense learned representations allow interaction with unstructured data on a scale unseen before.

AI/ML technologies allow businesses to be more effective and agile. Today, these technologies are becoming easier to build and deploy. Start investigating AI/ML technologies and how it can help your organization to grow and prosper. There are examples, stories and use cases from almost every industry. Do not miss your chance to use future technologies today.

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Do you want to reap the benefits of the advances in the fields of artificial intelligence and machine learning? With InterSystems IRIS and the Machine Learning (ML) Toolkit, it's easier than ever. Join my colleague Sergey Lukyanchikov and me on Tuesday, April 23rd at 11am EDT for the Machine Learning Toolkit for InterSystems IRIS webinar to find out how InterSystems IRIS can be used as both a standalone development platform and an orchestration platform for AI/ML models that brings together InterSystems IRIS, Python and other external tools.

Date: Tuesday, April 23rd at 11am EDT

Recommended Audience: Developers, Solution Architects, Data Scientists, and Data Engineers.

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