Analysis and applicability of artificial intelligence technologies in the field of RPA software robots for automating business processes

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This article deals with the analysis and application of artificial intelligence in the field of Robotic Process Automation (RPA) software for business process automation. RPA, more commonly known as "bots", is defined as a technology for optimizing and automating repetitive tasks in the digital business domain. These bots are programmed by humans to perform various tasks and specific actions in a totally autonomous way, mimicking the way a human does things (from a computing point of view). Today, the field of RPA is actively developing, and many companies are using this software to automate their business processes. RPA is certainly effective, with many advantages, but bots can't yet perform tasks that humans entrust to them. Indeed, these automation technologies must first be programmed, and not everyone is able to program them. However, with the emergence of AI, this intelligence will enable these robots to be trained and programmed to analyze certain problems and tasks autonomously. Also, with the fusion of AI, the "bots" will be able to make decisions for a company and thus gain in efficiency. As quoted in the text: "Today, thanks to the synergy of artificial intelligence and RPA, a company can do what has never been done in the automation of routine business processes".

<u>What does the fusion of RPA and AI enable in business processes?</u>

Text recognition	- This will enable RPA to work with handwritten documents so that they can be analyzed and processed computationally. Particularly for scanned PDFs, checks, receipts, prescriptions... - Recognize complicated handwritten text and transcribe it digitally. - Employees will just have to assist the robots, by processing documents that the robots are not sure they need to process
Image recognition	- To verify the authenticity of personal data (e.g., passport photos). - Identify the faces of working personnel from video-surveillance footage
Improve customer service efficiency	- Thanks to automated analysis of calls (voice, text), the software will be able to determine the mood, context, and importance of the call, and thus prioritize it. - The software will be able to identify the nature of the call so as to transfer the customer to the appropriate department. - It will also be able to prepare a text, which will then be converted into voice and used for mass notification (e.g., to warn of a flight delay by loudspeaker). - Improve customer assistance service (e.g., get a quote, find the nearest branch).