SEVEN ESSENTIALS THAT WILL PROPEL AI FROM FANTASY TO REALITY

Artificial intelligence (AI) has not only captured the imagination of the masses, but also the unflinching attention of enterprises the world over. This article explains why AI is now the go-to technology for businesses and the seven factors crucial for any AI initiative to succeed.

Perpetually wary of market disruptions, and in their quest to maintain a competitive advantage, board rooms and CXOs of Market Leader and Fast Follower brands across the world have rushed to artificial intelligence as the next big bet. By virtue of being early adopters of / adapters to disruptive business models and technologies, Market Leader and Fast Follower brands not only command the largest share of the market, but that of profits as well. They are the big boys or leaders of their segments, categories. — think Apple, Google, or even Tesla.

Market leaders tend to adopt a 'go-it-alone' strategy, while Fast Followers are open to co-innovation and co-creation. Fast Followers are also reactive and wait for the market leaders to take a position, before jumping in.

According to Constellation Research, though these leader brands are yet to achieve the full potential of mass personalization (market segmentation of one), their next rush is focused on investments in artificial intelligence use cases and pilots, and in establishing 'co-create' or 'co-innovate' partnerships with vendors. Their initiatives in AI's subsets of machine learning, deep learning, natural language processing, and cognitive computing have been steadily moving from science projects to new digital business models powered by smart services. A good example of this shift comes from

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machine-learning services that analyze sentiments or address fraud management patterns in commerce.

For an organization betting on AI for digital initiatives, the goal has to be precision decisions. Successful AI projects within enterprises require more than just great algorithms or access to data scientists. What the Market Leaders and Fast Followers have discovered so far are the following seven traits that require nurturing:

- **A large corpus of data:** The battle for large data sets has nothing to do with having more data. The ultimate goal is to build the largest graph that maps the connections within the data. A greater quantity of data will improve the precision of insights and allow for more patterns to emerge.

- **Massive computing power:** Winning brands will either own or have access to affordable computing power. The ultimate metric for AI rests not just in 'pricing by computing power,' but potentially, also in 'cost per kilowatt-hour.' Thus, the cheapest rate of computing power may determine the cost structure for AI smart services.

- **Time:** There is no substitute for time when it comes to AI. Algorithms need time to improve and gathering data sets requires time for better precision. More interactions in the network depend on time. Hence, early adopters gain the advantage of time.

- **Exceptional math talent:** The discovery of patterns, creation of new algorithms, and the ability to apply human intuition to computing requires great math talent. People enable artificial intelligence, and algorithms are only as good as the math talent that build them. Success will require the hiring of 'Digital Artisans' — people who can balance their right brain and left brain expertise.

- **Industry-specific expertise:** Vertical industry experience will emerge as the key differentiator in AI smart services. The more advanced and specialized the AI system, the more its relevance to the end users.

- **Natural user interfaces and experiences:** Expect AI systems to mimic human interaction going forward. Interfaces for sensory and visualization capabilities, voice, gestures, and more will improve providing natural, human-like capabilities.

- **Intelligent recommendation engines:** The output of AI comes to precision decisions. AI systems augment humanity. The recommendation engines that emerge will enable choices, accelerate decision-making, and ultimately provide filters that deliver situational awareness.

Figure: Seven elements of successful artificial intelligence (AI)
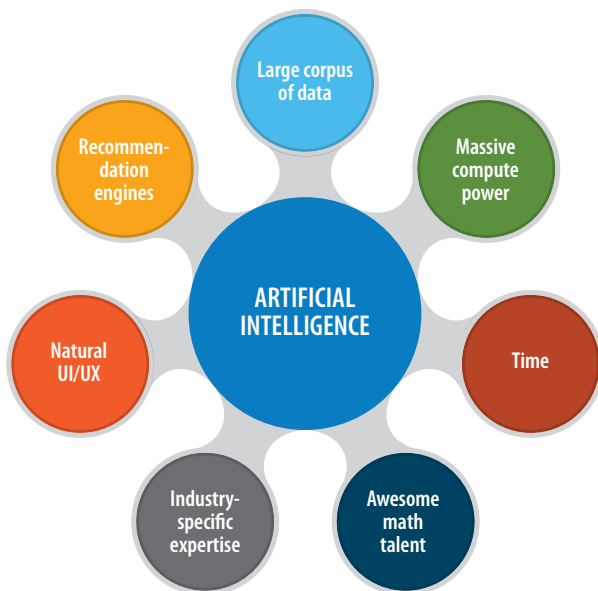
We feel that the value in AI will come from the smart services that emerge through digital transformation projects. More than just automation, these AI-driven smart services will power future business models that rely on the insights derived from digital technologies, data, and algorithms. The question that will soon make its way into your board room might be: How do we nurture these traits to ensure that our AI investments succeed?

About the Author

Ray Wang
Principal Analyst and Founder, Constellation Research

R 'Ray' Wang is the Principal Analyst and Founder of Constellation Research, Inc. He is also the author of the popular business strategy and technology blog 'A Software Insider's Point of View'. With tens of millions of page views a year, his blog provides insights into how disruptive technologies and new business models impact enterprises. He has held executive roles in product, marketing, strategy, and consulting at companies such as Forrester Research, Oracle, PeopleSoft, Deloitte, Ernst and Young, and Johns Hopkins Hospital.

Ray is a prolific keynote speaker and research analyst working with clients in diverse sectors like digital, innovation, business model design, engagement strategies, customer experience, matrix commerce, and big data. His Silicon Valley research firm advises Global 2000 companies on futuristic business strategy and disruptive technology adoption. He is a regular contributor to Harvard Business Review and is frequently quoted in The Wall Street Journal, Forbes, Bloomberg, CNBC TV, Reuters, IDG News Service, and other global media outlets.

His new book, Disrupting Digital Business, is published by the Harvard Business Review Press and available globally now. This book provides insights into why 52 percent of Fortune 500 companies have been merged, acquired, gone bankrupt, or fallen off the list since the year 2000. It highlights the fact that it is not technologies that drive this change — but a shift in how new business models are created by leveraging technologies.

He is available @rwang0 on Twitter

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