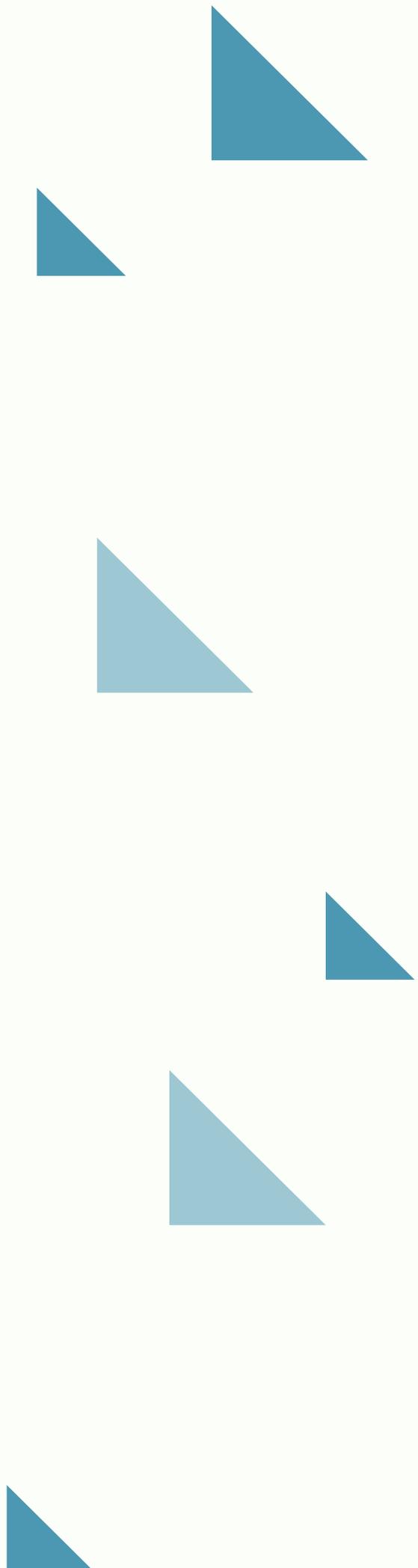


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# Is Your Startup AI- Ready?

# How to Plan and Execute Your First AI Initiative Successfully?

Developed By-Valiance Solutions



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There are more than 3 billion smartphone users in the world today. And as of the second quarter in July 2020, Artificial Intelligence (AI) received more than \$60 billion in funding. By 2030, AI will contribute a whopping \$15.7 trillion to the global economy.

Does that sound like a random coincidence? Actually, the extensive use of cellphones means that there is an extraordinary amount of data being generated every single day. And emerging technology — AI, Machine Learning, Data Science, etc — is the way that companies across the world are leveraging this data.

While the tech giants (Google, Facebook, Amazon, etc) are incorporating AI into their solutions in a big way, more traditional enterprises are also adopting AI. From GE leveraging AI for preventive maintenance of industrial equipment to Rio Tinto using Machine Learning to optimize the machine cutters for mined diamonds.

Having said that, startups are among those that are the most responsive to this call for AI adoption. Not only does AI make startups far more attractive to investors, but the right AI-enabled algorithms often become the key to building a scalable, differentiated business model.

## What is the right time for startups to implement AI?

If you're a startup that's thinking about implementing AI solutions, it's important to look at implementation sooner than later. Here's why:

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## ***Algorithms take time to learn***

AI and ML algorithms are self-learning. In other words, they get better over time as they deal with more and more data. The sooner you can build these algorithms, the more time for them to learn and get better. And that's where the competitive advantage will lie.

## ***You can always start small***

Let's take the example of DeepMind, a subsidiary of Alphabet. DeepMind is working on training AI systems to take on challenging tasks. But the process starts at a very basic level — teaching a virtual dog to fetch. So while the ultimate goal might be to build algorithms that can transform things like new drug synthesis and self-driving cars, the beginning is humble. And you can apply the same principle to how you're going to implement AI within your startup.

## ***Make sure you're AI-ready***

One of the biggest keys to successful AI and ML implementation is the presence of data. Unless there is an adequate amount of data to work on, these algorithms are unlikely to see a lot of success. It's also important to have your basic tech infrastructure in place before actually implementing emerging technology. The chances of generating a profit by using AI are 50% higher for those companies that have basic digital capabilities in place, including Big Data and cloud infrastructure.

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# *Aligning goals with the budget*

The fact of the matter is that there are many different ways to implement AI within your startup. While setting up your own Data Science team can be both time-consuming and extremely expensive, there are alternatives like AI-based SaaS solutions and outsourced AI projects that can be a lot cheaper. Plus, you can also leverage free frameworks like TensorFlow, Microsoft Cognitive Toolkit, or Theano to build smart models. The costs and barriers to AI are no longer what they used to be — it's just a question of aligning your AI goals with your budget.

## Different ways one can apply AI within a growing startup

There are many different ways in which you can apply AI within your startup, depending on your most pressing needs and the scale at which you're working.

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## ***Building key algorithms***

This is the most high-impact implementation of AI within your startup. In this case, you use Machine Learning and Artificial Intelligence to build smarter algorithms and models to make your business more scalable and efficient. For instance, fintech companies that provide micro-loans for consumers need to have the most differentiated and accurate credit risk model. Data science and machine learning can help these startups design these cutting-edge engines.

## ***Consumer analytics***

We generate 2.5 quintillion bytes of data every single day. Startups, especially those that are already a few years old, are also collecting a ton of data. However, they usually don't have the time or bandwidth to conduct complex data analysis and generate actionable insights.

This is where powerful analytics can play a big role. AI platforms like H2O, Microsoft Power BI and IBM Cognos Analytics can give startups the ability to understand their data in a much more sophisticated and holistic way. This means generating real-time, actionable insights that can help startups make more informed decisions, engage customers in a more personalized way, and align products with buyer expectations.

## ***AI-based tools***

If you're not ready to make a full-fledged commitment to AI, you can always dip your toes in the water. A good way of doing this would be by trying standard AI-powered tools to solve some of your pressing support functions.

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- ***Chatbots***

A whopping 85% of customer interactions will be handled by a chatbot by 2021. As a startup, you simply cannot ignore the power of conversational AI to support and market to clients. Having said that, there's a wide range of solutions. Starting from automated tools with a pre-programmed set of responses to chatbots that are completely AI-driven and designed to replace the human agent at every stage of customer interaction. You can go with whichever option your budget permits and begin your AI journey.

- ***Marketing platforms***

Marketing automation is one of the areas where you can definitely play around with AI/ML-powered tools. From creating customized experiences to having emotional intelligence in your marketing content to optimizing your sales funnel — most of these AI-powered tools are well within a startup budget.

## ***Build vs Buy vs Outsource***

This is a key question that every startup needs to answer before embarking on any AI journey. The wrong answer can result in the entire AI initiative going bust. Here are some factors you need to consider before making the final decision:

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- ***Is it a core requirement or an ancillary/support requirement?***

How important is the proposed AI solution to your core business model? For instance, if you're a digital lending startup, your credit risk algorithm is core to your business — the efficacy of this algorithm will determine your success vis-a-vis competitors.

If your business model is entirely dependent on this algorithm building it in-house or finding a tech partner is the right answer. Even when you choose to outsource the requirement to a tech partner it's important to find someone that:

1. Has expertise in the specific requirement that you're looking at
2. Can integrate the algorithm into your existing product and processes in a seamless way
3. Is both willing and able to take care of post-implementation support and maintenance

If on the other hand, the requirement is not intrinsically linked to the nature of your business, then buying a SaaS tool is a feasible option. For instance, if you're looking to use AI to automate some of your marketing efforts, it might be much faster and simpler to subscribe to the right platform.

- ***Should this solution be part of the startup's IP (Intellectual Property)?***

This is closely related to the previous question. If the AI solution is critical enough that it should necessarily be owned by the startup, then it's important to build it in-house.

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You can also choose to go with a tech partner who will transfer the IP to you upon completion of the project. Buying a SaaS solution is simply not an option.

- ***What is the level of customization that's required?***

How specific to your business is the solution that you need? If you need something highly customized to your business, with lots of tweaks needed overtime, consider building it in-house. If you need a fairly customized solution, but one that's unlikely to keep changing over time, outsourcing is your best bet. Finally, if the solution you're looking for is largely off-the-shelf, with some minor customization, a SaaS platform is the answer.

- ***What are the costs involved?***

This is one of the biggest factors in making this decision. If you're going to build a solution in-house, you have to consider the recruitment and training costs involved. Because data scientists and ML engineers are so hard to find, recruitment itself can take months. Secondly, setting up a data science team might be prohibitively costly — especially if you're an early/growth-stage startup that's cost-conscious. When you're looking to build an important, customized solution with a limited scope and within a limited timeframe, outsourcing is your best bet from a cost perspective. If the solution is more standard, then cloud-based SaaS tools are definitely the most economical.

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# Some AI use cases across startups

In the past 8 years or so, we've helped a number of startups (as well as some enterprise clients) incorporate AI into their organization. We've worked on most of the areas described above — from core business algorithms to leveraging AI/ML to dramatically enhance outcomes in support functions. Here are a couple of common use cases:

## *Managing credit risk with AI*

Fintech startups, especially those in consumer lending, have been particularly receptive to leveraging AI/ML in their decision engine. On the one hand, they have a lot of unstructured information available about their users (usually end consumers or very small businesses). On the other hand, their credit risk algorithms are generally built on heuristics and don't take this ever-expanding, evolving data into account.

Over the years, we've built core algorithms for many such companies with incredibly quick results. In one case, we helped an NBFC specializing in consumer loans to reduce credit fraud. With the result that they ended up saving \$1.5 million per year. In another case, we helped a housing finance company reduce their credit default rate by as much as 66%. That too in a span of just 18 months.

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# *Automating customer acquisition with AI/ML*

One of the major challenges high-growth startups face is finding scalable processes as they grow at a break-neck pace. Over time, archaic processes that worked so effectively at a small scale become unwieldy and inefficient. This is where emerging technology helps you build new processes that are entirely automated and can scale seamlessly.

We worked with a financial services firm that was acquiring corporate customers across the world. Their legacy data collection and management process had become so inefficient over the years that they were missing sales opportunities. We built an ML-based engine that not only collected and managed the data seamlessly, but also assigned a Propensity Score based on past data. Within 3 months, the entire customer acquisition process was fully automated and the Propensity Score was more than 75% accurate.

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# The bottom line

AI is definitely a buzzword that's extremely overused these days. While AI is definitely not the answer to every kind of business problem, it can still shape your business in a significant way. Plus, with the rate of advancement in AI/ML, startups that don't incorporate it in how they do things might lose their competitive edge.

Having said that, it's important to figure out where you're at in your AI journey. If you feel like there simply isn't enough data and that using AI/ML in your core business is a long way off, start small. Maybe use some AI-powered tools to automate functions like marketing and customer support.

If you feel you're AI-ready, see whether you can invest the time and resources to build your own Data Science team. If not, consider partnering with a team that has AI/ Machine Learning expertise in your domain and can deliver the solution you have in mind.

Whichever direction you choose to go in, do keep in mind that your AI journey is a constantly evolving one. Your AI goals and projects could look very different one year or even 6 months from now. So make sure you set aside some time every few months to revisit the AI roadmap and see if anything needs to be done differently.