

How can Artificial Intelligence Help Small Businesses?

By: Arjun Vinodhan

8th Grade – Gateway Middle School



Problem Statement

- Can small business owners and employees grow their store or service by using AI to appeal to a wider range of customers? Can AI help with finance, logistics, customer support, and solve other problems that often burden small businesses?
- **Prediction:** I think that AI cannot be used just yet: it is not yet mature, and is still too expensive to be realistically used by small businesses.

A background on Artificial Intelligence



- **AI (Artificial Intelligence)** is a **complex machine capable of imitating intelligent human behavior**. Using machine learning and “artificial neural networks”, computers can be trained to accomplish specific tasks by processing large amounts of data and recognizing patterns in the data.
- **Behaviors associated with human intelligence:** AI systems will typically demonstrate at least some of the following behaviors associated with human intelligence: planning, learning, reasoning, problem-solving, knowledge representation, perception, motion, and manipulation.
- **AI applications:** AI has many applications, but the main ones are in agriculture, aviation, computer science, financial systems, health, and education.
- **Small Businesses:** AI can be used by small businesses to streamline online retail and improve customer-relationship management (CRM), improve logistics and cybersecurity, gain competitive intelligence, and make better hiring decisions.

How AI can streamline online retailing?

- **More Presence:** In this modern day and age, as more and more consumers start to shop online, small businesses often struggle to have a presence against powerhouses like Amazon and Walmart.
- With the introduction of AI, website-creating platforms and advice pages and forums, small businesses have a far greater chance of selling more products on the internet.
- **Analytics:** AI can take customer's previous searches on the website and online public data to see what they like, and create recommendations that fit the customer's interests on the main page. AI can also consider holidays and special discounts and sales to promote specific products to the consumer.



How AI can streamline online retailing? (Cont.)

- **Augmented Reality:** AI is especially helpful for small businesses in providing a first-hand experience of a product for the customer. For example, some small furniture stores are using AI to give customers a virtual feel of furniture in their houses and rooms, and streamlining the setup process.
- **Product Categorization:** AI can help businesses with product categorization, automatically finding keywords and tags in a product's description to sort it into virtual categories, so customers can see what they want to see.



How AI can help with CRM (Customer Relationship Management)?

- CRM systems are designed to collect direct customer data from multiple sources (email, phone, and social media) to improve the sales process and quality of products.
- AI can help small business owners by analyzing customer feedback from their communication channels without human intervention, and implement targeted or personalized marketing based on that feedback.



How AI can optimize Customer Support and Communications?



- Many online retailers, big and small, have begun to use an AI managed 24/7 online chatbot to replicate regular human customer communications.
- **AI Chatbots:** It's difficult for small businesses to have dedicated customer service teams or sales teams. Chatbot AIs can help owners focus on more important problems and will help customers have a more satisfying experience on the website.
 - In the near future, AI will be able to almost nearly replicate human support, but with the added possible benefits of transcending language barriers and giving patient explanations to frustrated customers.
 - Chatbots will be able to track user data to display products that it thinks the customer will find interesting.
 - Chatbots also don't have the added pressure that human communicators face in providing incorrect or misleading information. They will usually have consistent responses, as long as it was programmed with the right information.

How can AI help small businesses with Logistics?

- Small businesses often have a huge problem in logistics: it is difficult to ensure a seamless delivery all the way from the manufacturer (usually them) all the way to the customer's doorstep. AI can help.
- Logistics is very data-driven, requiring crunching delivery times, locations, reviews, and general experiences. AI can easily give real-time data in one simple analysis, and can even go as far as detecting congestions in a section of the delivery process (for example, in the packaging stage in a warehouse), and alerting the employees to the situation immediately.



Cybersecurity with AI



- Threats to business and consumer data is not uncommon with small business owners. Even the smallest of companies are often exposed by partners to digital threats: banks, retailers, and credit agencies, among others, have lost customer data.
- Hackers and malicious individuals also hack into business software and websites to steal data.
- AI based cybersecurity software can protect before instead of alert after an incident. They constantly scan for unusual activity, and illegal activity can be spotted quickly.

How AI can help in Human Resources

- Human Resources is the department in a business that focuses on hiring new employees, administration of the employees, and training of the new employees as well.
- AI can easily be used to sort through hundreds of thousands of potential applicants to find a hire that fits the exact needs and criteria of the job.
 - With new hires, AI can also serve as a 24/7 online database that provides basic information on things like benefits and company policy.



Competitive Intelligence

- For small businesses, knowing exactly what a competitor in your local area is doing is essential, but time-consuming.
- An AI software can instantly analyze several platforms (online updates, sales, videos, social media posts, etc.), and create a precise report that is easy-to-read.
 - AI can help businesses respond to changes in competition and in the industry in general, both quickly and efficiently.



Disadvantages of AI in Small Businesses

Disadvantages of AI

High Cost

Lack of Personal
Connections

No Replicating
Humans

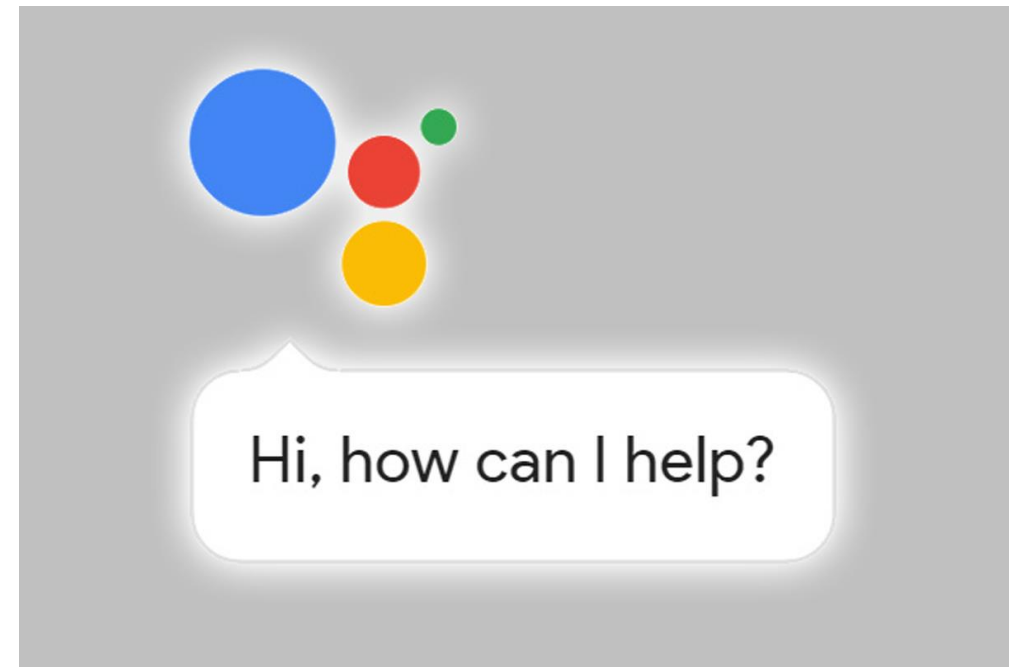
Addiction

Lesser Jobs

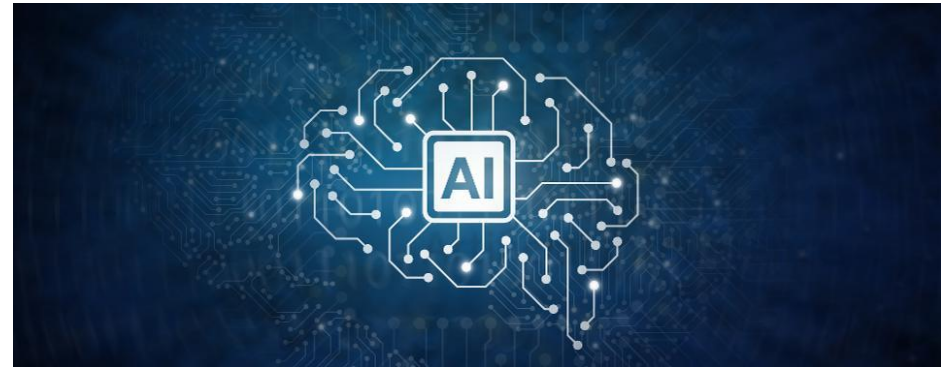
- **Cost:** As a small business, it is likely that every small decision is carefully thought over. AI, although not very expensive, is definitely an investment.
- **Maintenance:** Although AI should function independently, there is still the chance of it suddenly failing or breaking down. Employees must always be aware of sudden shutdowns, and must respond quickly.
- **Incorrect Data:** Although the chances of this are very slim, AI can sometimes give incorrect data to a customer, even though it was programmed with the right information.
- **Privacy:** Because AI is dependent on collecting personal data, some customers or employees might not appreciate their data being collected to improve a service.

Options for Small Businesses

- Although AI isn't an investment many businesses would consider, it definitely has its advantages: their online presence would expand rapidly with customization and chatbots, and the business can benefit from the inside as well.
- There are many software options available today: Crayon for competitive intelligence, Google Assistant for information, and more. These are essential protections all businesses should have.



Conclusion



- Even with today's limited technology, artificial intelligence can indeed help businesses with the basic and wanted tasks that need to be done in order to keep customer flow high.
- **Online Experience:** AI can give personalized and high-tech options for consumers to try out in order to make the purchasing experience more seamless.
- **Customers:** AI can advance CRM by acting on more customer input, and can also improve communications with things like a chatbot.
- **Logistics:** AI can sense problems or congestion, and can alert employees to the situation.
- **Cybersecurity:** AI can help owners protect their businesses from criminal fraud or theft, and can detect unusual behavior *before* it happens.
- **Human Resources:** AI can help owners make more sensible and productive hires, automatically sifting through thousands of applications to find the right person.
- **Competitive Intelligence:** AI can detect changes in marketing or product lineups among competitors in the same town, and inform owners of shifting trends or ideas.

My prediction was mostly wrong: unlike some other applications, AI is starting to find its potential in businesses, both large and small. As AI becomes more prevalent, and as costs come down, it becomes easier for small businesses to adopt AI.

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