



7 Things AI Can Already Do for Your Business

Table of Contents

- Introduction 1
 - 1. Building a Customer Service Agent 2
 - 2. Analyzing Customer Insights 3
 - 3. Supply Chain Visibility 4
 - 4. Forecasting Demand 5
 - 5. Fraud Detection 6
 - 6. Risk Management 7
 - 7. Processing Unstructured Documents 8
- Conclusion 9

Introduction

If you're a business owner in the 21st century, the question you may be asking when seeing the word "AI" is far beyond the *whens* and *whys*, but *how* to effectively harness its power so that your business stays at the forefront of the competitive market.

In a most recent report, [Gartner](#)¹ predicts that by 2026, 20% of organizations will use AI to streamline their organizational structure, eliminating more than half of their current middle management positions, and by 2029, 10% of global boards will leverage AI insights to improve decision making in the hope of enhancing overall organizational performance. On the other hand, Bank of America also finds that large companies adopting AI could increase their operating profit margins by 2% over the next five years, translating to approximately \$55 billion in annual cost savings.

True, AI is a powerful tool that, if adopted strategically, can significantly advance an organization's overall performance and foster a culture of agility to keep up with the rapid pace of change in the technical landscape, yet not all organizations are prepared for this transformation. In fact, even some of the earliest adopters of AI have found it challenging to jog through the extensive capabilities of AI, therefore, accurately estimate its actual impact and return on investment.

Seeing the need for a strategic justification of AI implementation, today, we've identified 7 most widely adopted use cases that demonstrate how AI can drive measurable outcomes across various business sectors. These use cases are extremely versatile and can be applied to businesses across industries with the commitment to innovate and adapt their processes, ensuring they remain relevant and responsive to changing market demands. We hope to demonstrate, through these cases, how different types of AI technologies—such as generative AI, predictive AI, and Agentic AI—can be utilized as a combined approach across the spectrum to achieve strategic goals. More importantly, we'd like to shed light on the capability of the Shakudo platform and how you can harness the power of these AI solutions in a unified and secure environment to enable transformational change in your organization.

1 . Building a Customer Service Agent: Natural Language Processing (NLP)

One of the most frequent uses of AI across all industries nowadays is the implementation of chatbots that act as the bridge between customers and a complex internal knowledge base, facilitating timely and seamless communication that eventually leads to enhanced customer satisfaction. By harnessing the power of generative AI, these chatbots can utilize advanced Natural Language Processing (NLP) techniques to understand user queries and provide relevant and contextually appropriate responses that assist customers in need.

Purpose

To enable machines to understand, interpret, and respond to human language

Use Cases

Chatbots, language translation, sentiment analysis, speech summarization, instruction manual walkthrough

Notable Industry Applications

Retail

Assisting customers with product inquiries, order tracking, returns, and personalized shopping recommendations

Banking and Finance

Handling customer queries related to account balances, transactions, loan applications, and fraud detection

Travel and Hospitality

Offering support for bookings, cancellations, itinerary changes, and local information for travelers.

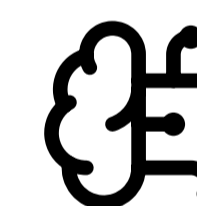
See It in Action: [Here's](#) a stack of data components that can help deploy advanced AI-powered agents that provide instant and personalized assistance.

STEP-BY-STEP GUIDE



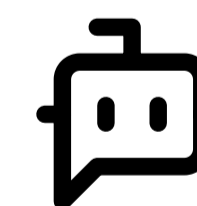
Step 1: A Well-Organized Database

To ensure that the chatbot has access to accurate and comprehensive information, you need to make sure that the data stored in your enterprise knowledge base is clean and organized. Choose a data scrubbing and integration tool that ensures structured and scalable data storage.



Step 2: Pick an LLM

Select a LLM that best aligns with your business needs. Consider factors like the model's capabilities to scale, available language support, and customization options.



Step 3: Client Facing Agent

Build a front-end UI that directly interacts with the customers. Consider the following: audience base, tone of communication, preferred channels such as website or social media, and types of interactions (e.g., FAQs, support requests) to tailor its functionality for a positive user experience.

2 . Analyzing Customer Insights: Descriptive Analytics AI

Descriptive Analytics AI utilizes advanced analytical techniques to help businesses extract insights based on customer interactions, such as feedback content and behavior patterns, to create personalized recommendations and experiences for their targeted audience. Its ability to understand customer sentiment not only boosts engagement but also fosters loyalty in the long run.

Purpose

To analyze and summarize past data to understand what has happened historically

Use Cases

Business intelligence dashboards, sales performance report, customer behavior analysis

Notable Industry Applications

Retail

Optimize marketing campaigns based on BI tool analytics on social media, email marketing, and web traffic

Healthcare

Improve patient care, resource allocation, and treatment outcomes through monitoring data such as treatment efficacy and readmission rates

Financial Services

Assess the creditworthiness of loans, monitor regulatory compliance, and analyze market trends by processing data from market reports, articles, and online communities

See It in Action: [Here](#)'s a recommended data stack to revolutionize marketing strategies through advanced media mix modeling and optimization.

STEP-BY-STEP GUIDE



Step 1: Establish a Data Repository

Create a well-organized data repository by collecting and integrating data from various sources like customer feedback, social media comments, support tickets, and reviews, ensuring the information is accurate and scalable for analysis.



Step 2: Pick an Analytical Tool

Choose an analytical tool that best aligns with your analytical needs. Consider features such as data visualization capabilities, ease of integration with existing systems, and processing capabilities.



Step 3: Develop Insights Dashboards

Create an interactive dashboard so that insights can be easily visualized and interpreted by stakeholders. Tailor these dashboards to include key metrics such as customer satisfaction scores.

3 . Supply Chain Visibility: Agentic AI and Computer Vision

Agentic AI—AI systems that can operate autonomously and make decisions based on real-time data—is predicted to produce a virtual workforce of agents to assist and augment the work of human labor workers. Combined with computer vision technologies, they utilize advanced algorithms and image recognition capabilities to monitor different aspects of the supply chain, playing a crucial role in enhancing supply chain visibility and allowing businesses to generate prompt responses to the changing market.

Purpose

To integrate data from Internet of Things (IoT) devices (e.g., GPS trackers, RFID tags, temperature sensors) for real-time visibility of goods throughout the supply chain, monitor physical assets, and analyze visual data from warehouses or transport hubs

Use Cases

Real-time shipment tracking, quality control, inventory counting, environmental condition monitoring for perishables, and vehicle management

Notable Industry Applications

Manufacturing

Conduct real-time quality inspection on production lines by analyzing images of products, automating inventory management, identifying products, and managing stock levels in the warehouse environment

Transportation

Enhance safety, reduce traffic accidents, and increase transit efficiency through real-time image recognition and autonomous navigation

Agricultural Automation

Monitoring crop health, optimizing irrigation and pest control with data collected by automated drones and vehicles

See It in Action: [Here's](#) a tailored stack for AI-driven inventory management to optimize stock levels with maximum efficiency.

STEP-BY-STEP GUIDE



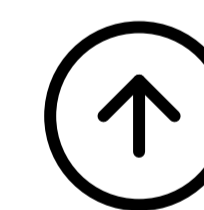
Step 1: Define Supply Chain Objectives

Define your supply chain visibility objectives and the key challenges you want to address. Key objectives can include: improving inventory accuracy, reducing lead times, ensuring shipment integrity.



Step 2: Choose the Right Data Stack

Look for solutions that integrate Agentic AI capabilities with computer vision technologies. Consider factors such as real-time data processing, compatibility with existing systems, and scalability to handle future growth.



Step 3: Implement Solutions

Integrate both technologies into your supply chain operations to monitor and analyze data. Leverage these solutions to automate decision-making processes based on insights gained and in-depth analysis to improve supply chain performance.

4 . Forecasting Demand: Prescriptive AI

Prescriptive AI combines machine learning algorithms and advanced data analytics to forecast any future demand or change in the market based on historical data, trends, and other analyses such as time of the year and regional culture. The goal of leveraging prescriptive AI is to assist businesses in properly allocating resources and optimizing inventory, preparing themselves for a dynamic future, and staying ahead of the competition.

Purpose

To recommend actions based on predictive models and guide decision-making as well as optimizing processes

Use Cases

Automated decision systems in finance, supply chain optimization, personalized marketing strategies

Notable Industry Applications

Healthcare

Forecast demand for medical equipment, medications, and staffing based on predictive analysis. This becomes even more crucial during emergencies, such as a pandemic, where accurate, immediate, real-time forecasting becomes crucial to managing resources efficiently

Manufacturing

Ensure production efficiency by accurately anticipating the demand for specific product lines to avoid overproduction and minimize costs

Energy and Utilities

Predict fluctuations in energy consumption and come up with optimal energy distribution strategies

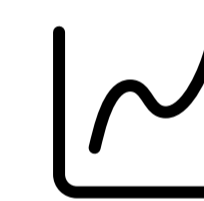
See It in Action: [Here's](#) a specialized AI stack designed to optimize healthcare staffing for balanced patient care and operational efficiency.

STEP-BY-STEP GUIDE



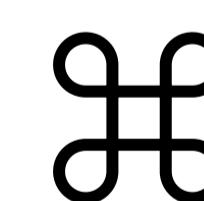
Step 1: Choose the Right Data Sources

Since forecasting is always at risk of inaccuracies, it is important that the right information is gathered and integrated into the models in the first place to minimize the risk. Consider integrating multiple data sources and diverse data types to increase the reliability of the forecast.



Step 2: Implement Demand Forecasting Models

Choose a prescriptive AI tool that fits your forecasting needs. Consider capabilities such as advanced analytics, real-time processes, and integration with existing systems. The forecasting model should also be scalable and adaptable as your data volume and complexity grow.



Step 3: Develop Interactive Dashboards and Automate Decision-Making

Develop dashboards to visualize demand forecasts and key metrics; use prescriptive AI systems to automate demand planning and production schedules.

5 . Fraud Detection: Anomaly Detection and Computer Vision

Fraud detection leverages computer vision and algorithms like clustering and outlier detection to flag unusual transactions or abnormal account activities. A combination of these technologies helps businesses monitor standard processes and safeguard any operations that may be at risk. The goal of fraud detection is not only limited to safety maintenance but can be applied to a rather broad spectrum, such as reducing losses and improving customer trust in the long run.

Purpose

To identify data outliers and enable machines to interpret and make decisions such as sending prompt alerts, monitoring and preventing access based on visual data and unusual activity detection

Use Cases

Fraud detection, cybersecurity, predictive maintenance, quality control, along with image recognition, object detection, segmentation, and image generation

Notable Industry Applications

Financial Services

Leverage advanced algorithms to monitor real-time transactions and flag any unusual patterns for identity theft, credit card fraud, money laundering and other types of fraudulent activities

Telecommunications

Analyze call detail records to identify unusual activities and leverage machine learning to mitigate risks and safeguard against customer identity theft

E-Commerce

Analyze user data including browsing habits, purchase history, and return patterns to identify trends and address potential abuse of return policies

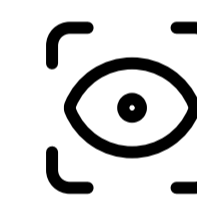
See It in Action: [Here's](#) how Shakudo's advanced anomaly detection stack uncovers critical business risks by identifying subtle irregularities across vast datasets.

STEP-BY-STEP GUIDE



Step 1: Establish a Structured Database

Since it takes a significant amount of data for the systems to effectively learn and recognize patterns before they're capable of identifying abnormal and potentially fraudulent activities, it is crucial to establish a well-structured database that consolidates data from various sources.



Step 2: Implement Anomaly Detection Models

Select a model and train it to create a robust anomaly detection system capable of identifying security threats. Ensure data security in the process by leveraging models that operate directly on your governed data without requiring data movement for further data privacy protection.



Step 3: Develop Response Protocols

Implement automated response protocols in case of emergencies or fraud detection, such as temporarily suspending accounts or notifying corresponding authorities.

6 . Risk Management: Digital Twins and Simulation Models

Risk management utilizes digital twins and simulation models to collect data from sensors and IoT devices to create virtual representations of physical assets and systems before assessing potential future risks of the business. Simulation models can also assess how different processes can impact the outcomes and operations of businesses to effectively counteract vulnerabilities in real-time. This proactive approach enables organizations to identify issues before they occur, ensuring that they can implement appropriate risk mitigation strategies and maintain operational resilience.

Purpose

To provide insights into potential risks and uncertainties by creating accurate simulations that allow organizations to run tests under different circumstances before making informed decisions

Use Cases

Scenario analysis, predictive maintenance, operational optimization, supply chain resilience, and financial risk assessment

Notable Industry Applications

Aerospace

Simulate different flight scenarios by creating virtual replicas of aircraft during the design phase to assess emergency response capabilities, optimize fuel efficiency, reduce emissions, and enhance overall performance

Climate and Energy

Model energy systems, such as solar panels and wind turbines, to predict energy production and optimize management. Simulate the environmental impact of policies to evaluate the consequences of various energy practices

See It in Action: [Here's](#) how digital twin technology is revolutionizing system performance through virtual replication.

STEP-BY-STEP GUIDE



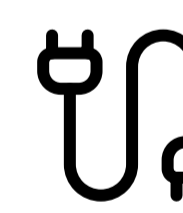
Step 1: Create Digital Twin Framework

Establish a comprehensive framework for creating digital twins of your physical assets. Gather data from sources such as sensors, IoT devices, and operational metrics, to build accurate digital replicas that reflect the real-time status of systems and processes.



Step 2: Implement Simulation Models

Implement a model that is capable of analyzing potential risks and performance under both controlled and uncontrollable conditions for a comprehensive assessment.



Step 3: Monitor and Optimize Performance

Monitor the performance of both the digital twins and the physical assets to improve operational efficiency and close any performance gaps. Identify discrepancies and optimize processes, ultimately reducing risks and enhancing system reliability.

7 . Processing Unstructured Documents: Information Retrieval Systems and Optical Character Recognition

Every business, regardless of size or industry, will inevitably encounter a vast array of data clusters at some point during its development. To derive value from this data, it must be organized and transformed into actionable insights. Information retrieval systems and OCR technologies convert documents into editable, searchable, and archivable digital resources, while information retrieval systems help efficiently extract relevant data from a vast amount of information so that decision-makers can leverage these insights for strategic planning.

Purpose

To convert unstructured data into structured formats, making it searchable, accessible, and analyzable, therefore, assisting organizations to make informed decisions

Use Cases

Document digitization, data extraction, sentiment analysis, automated categorization, and enhanced search capabilities

Notable Industry Applications

Legal Sector

Utilize OCR to digitize legal documents, contracts, and case files, enabling easier retrieval and analysis of relevant information. Information retrieval systems can help lawyers quickly locate precedents and related cases

Healthcare

Apply OCR to extract data from patient records and handwritten notes, facilitating better patient management and ensuring that critical information is readily available for healthcare professionals. Information retrieval systems can help in quickly accessing relevant patient history and treatment data

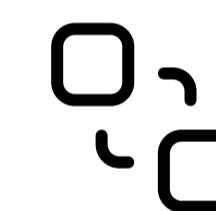
See It in Action: [Here's](#) how AI-powered solutions can transform clinical documentation with automated note generation and capabilities to extract key information from siloed healthcare records.

STEP-BY-STEP GUIDE



Step 1: Establish Document Integration Framework

Start with a framework that organizes digitized unstructured documents with OCR technology—gather documents across different data formats such as texts, images, notes, and reviews. Consider the scalability of the system to accurately convert these documents into editable and searchable information.



Step 2: Implement Information Retrieval Systems

Integrate information retrieval systems that can analyze collected data and extract valuable, relevant, and accurate insights as needed. Ensure these systems are designed to categorize documents effectively and support keyword-based searches.



Step 3: Ensure Data Quality and Integrity

Regularly update the models based on feedback and errors identified to ensure data quality. Optimize processes for data extraction, and enhance the overall efficiency of document processing.

Conclusion

It can be difficult to measure the exact ROI of AI technology mostly because new generations of AI algorithms and improved data processing models are emerging daily. However, the reality is such that the rapid evolution of this technology can only yield benefits that surpass its initial costs. For organizations looking to thrive in the competitive market, the ability to proactively identify and implement AI solutions across various business functions has become imperative.

We hope that the 7 use cases we've provided demonstrate the versatility of AI and its capability to impact every single aspect of business operations. Be it reducing costs, improving operational efficiency, enhancing performance, or fostering creativity across the organization, this is a tool that can—and should—be utilized by companies today. Organizations working with vast and diverse data at their disposal stand to gain the most by embedding AI into their strategic initiatives, positioning themselves for success in an AI-driven world.

About Shakudo

Shakudo creates compatibility across the best-of-breed data tools for a more reliable, performant, and cost effective data and AI operating system. As an operating layer on top of your cloud Shakudo allows you to pick the best-of-breed data tools for your needs, while providing a platform with fully automated DevOps experience. This combines the best of both worlds in data stack practices so you can focus on delivering business value with data. Shakudo is the most **easy, secure, cost-effective, scalable** way to bring the most advanced data and AI tools to your data. Find out more at **shakudo.io**.