

Artificial Intelligence Usecases Comprehensive Guide

<https://appliedai.com>

Executive Summary

As an executive, you may keep hearing about AI, its achievements like beating humans in Go, tech giants' investments in AI but you still may not know how AI will change your business and how your business can benefit from AI. This guide is all about that final question: How can your business benefit from AI?

For every business function like sales, marketing & customer service, you can read how AI can be used in that function.

Some industries have specific business functions. Only healthcare companies have medical research units and mostly companies in the transportation and automotive industries are investing in self-driving cars. To cover these industry specific functions, we also cover AI applications in fintech, healthtech and self-driving cars.

We provide detailed information in each category but your company's AI transformation all starts with a decision. A decision to integrate AI into your company's business. Eventually AI will power decisions in every industry and business functions and companies that are slow to embrace this change will be left behind.

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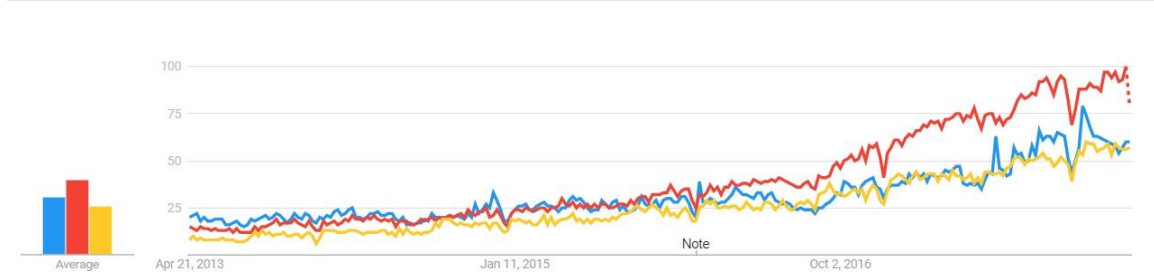
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Introduction

● artificial intelligence Search term
 ● machine learning Search term
 ● data science Search term
 + Add comparison

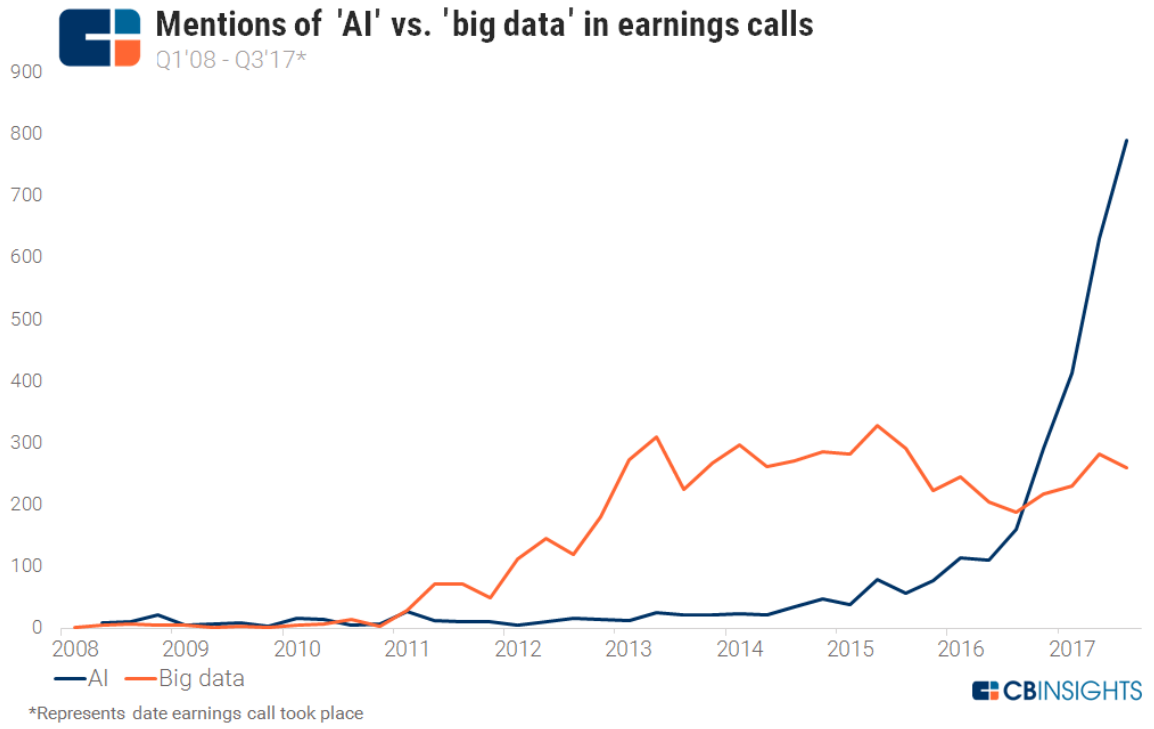
Worldwide ▾ Past 5 years ▾ All categories ▾ Web Search ▾

Interest over time ? ↓ <> ↻



As you can see in the Google Trends graph above, interest in AI, its subdomains and related fields such as machine learning and data science has grown ~3x in the past 2 years.

And public company executives especially have increased interest in AI as their mentions of AI and artificial intelligence increased ~8 times since 2015.

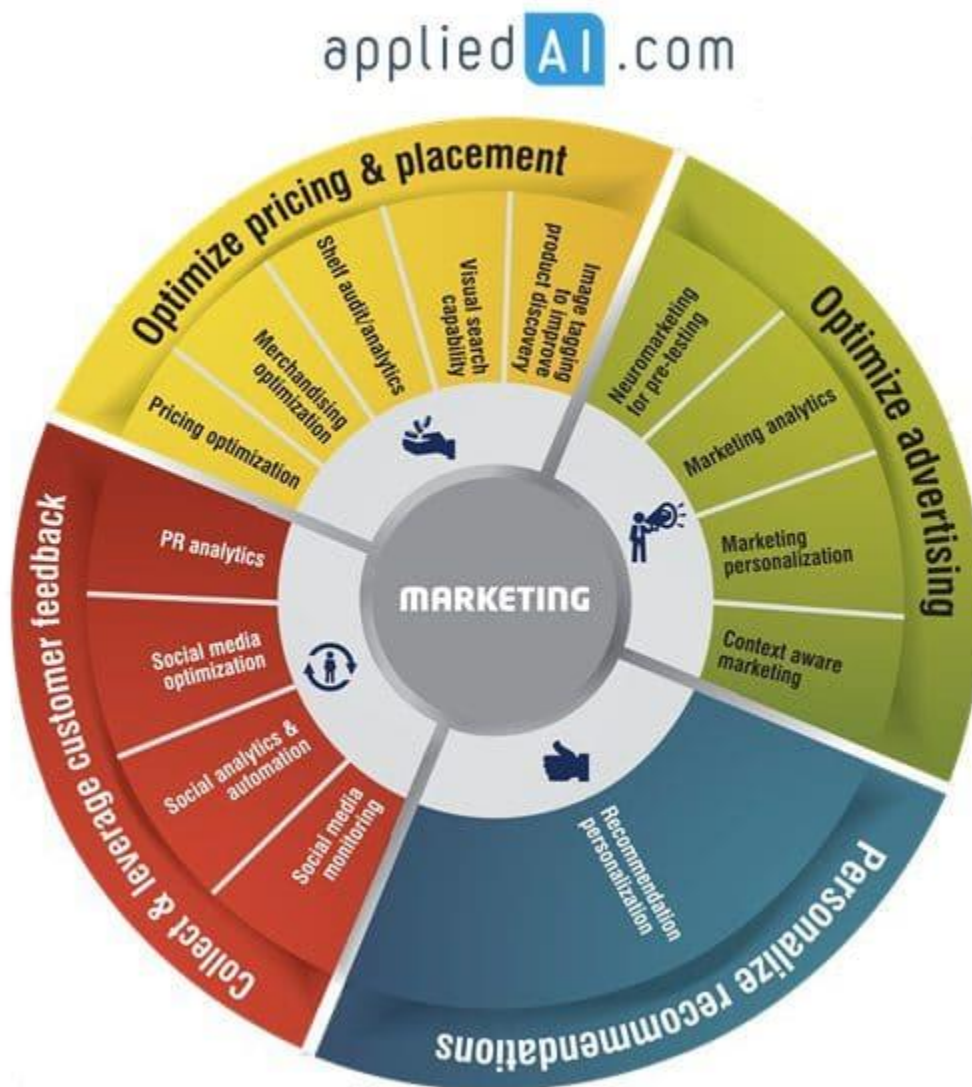


We believe that interest in the topic is justified and that AI can transform your business. But it is impossible to get anything out of any new technology without understanding how it can improve your specific field of work. Here we set out to do that. Just go to the section for your business function and read in detail how AI will change that function.

AI Use Cases

Marketing

AI gives marketers new capabilities to acquire new customers, retain and upgrade existing customers. We categorize these capabilities under the 4 headings listed below. Additionally, as in all business functions, AI and machine learning approaches provides new analytics capabilities to marketing professionals.



1- Optimize Product, Pricing & Placement

Gesture Control: Gesture control enables higher levels of activity and engagement by allowing users another mode of interaction with your digital products. Quantify the gesture levels and other engagements in order to provide meaningful insights.

Pricing Optimization: Also called dynamic pricing or demand pricing, pricing optimization allows companies to optimize markdowns. Optimal markdowns minimize cannibalization while maximizing revenues. One of the easiest transformations a business can achieve, dynamic prices directly impact the bottom line and can be rolled out in a matter of days. Optimize markdowns to minimize cannibalization while maximizing revenues.

Physical placement

Merchandising Optimization: Leverage machine learning and big data to optimize your online or offline merchandising. Identify which products are of significant importance for customers. Develop similar products for up-selling and cross-selling.

Shelf Audit/Analytics: Use video, images or robots in the retail area to audit and analyze your use of shelf space. Place your product in the right place. Gain further insights regarding which shelves to perform better. Identify and manage suboptimal performing shelf spaces.

Digital Placement

Product Information Management: Manage and improve all your product information centrally to improve product discoverability and appeal. Keep your SKU's info up-to-date. Automatically modify and update the product description, box description, and all other related information.

Website Personalization: Personalize your website based on customer data. Provide them with the right products displayed on the main focus points of the page. Provide them with their own color preferences, geographic location details. Seamless integration of their data into your website's overall attractiveness.

Visual Search Capability: Leverage machine vision to enable your customers to search your products by image or video to immediately reach their desired products.

Image Tagging to Improve Product Discovery: Leverage machine vision to tag your images taking into account your users' preferences and relevant context for your products.

2- Optimize marketing spend

Enablers

Neuromarketing: Leverage neuroscience and biometric sensors to understand how your content impacts your audience's emotions and memory. Test your content in private until it achieves the desired effect.

Context-Aware Marketing: Context is crucial to marketing. Consider these advertising experiences: You watch a video of a plane crash interrupted by an airline ad. You are reading about a specific phone model exploding when overcharged and you see the ad for that model on the same page. There are horrible yet relatively innocent examples. There has been numerous cases when brand ads were shown in-between videos of hate-groups. Context-aware advertising companies leverage machine vision and Natural Language Processing (NLP) to understand the context where your ads will be served. Protect your brand and increase marketing efficiency by ensuring your message resonates with its context.

3rd Party Data: Leverage 3rd party data to better understand your existing customers and target potential customers. Increase your precision by using the numbers from external sources. Expand your target audience by identifying possible leads.

Omnichannel: Personalize your marketing communication across different paid marketing platforms. Create a coherent strategy for the overall marketing strategy. Analyze comparatively the impact of your efforts on different platforms.

Retargeting: Retarget customers who have already expressed interest in your products or services. Increase your sales by engaging the right customer.

Channel specific optimizations

Mobile Marketing: Personalized, individual messaging based on each customer's real-time and historical behaviors. Most of the users are active in mobile platforms, develop your strategy in order to gain a greater share in mobile traffic.

Email Marketing: Emails that are tailored to individual behavior. Detect which email type performs better with your product and customer. Customize by including the necessary email structure and images.

Video Commerce: Auto identify products in videos generated by you or users. Make videos with embedded products shoppable by inserting relevant links.

Advocacy and Loyalty Marketing: Using advocacy system and referrals to introduce and create a customer base via personal connections. Leverage the

power of connections by providing the right referral campaign. Estimate the possible sales figures in your marketing strategy by using the impact profile of your customers.

Content Generation: Choose the topic for your content marketing, power it with proprietary data feeds and let AI create unique content. Rather than spending hours for the content, automatic content generation will provide you with the right tools.

3- Personalize recommendations

Recommendation Personalization: Also called recommendation engine or recommendation system, these systems leverage customer data to retain and upgrade customers with personalized recommendations via email, site search or other channels. Leverage customer data to reach customers with personalized recommendations via email, site search or other channels.

4- Connect & leverage customer feedback

Social Media Optimization: Leverage machine learning to optimize the channel, target audience, message and timing of your social media posts.

Social Analytics & Automation: Leverage Natural Language Processing and machine vision to analyze and act upon all content generated by your actual or potential customers on social media, surveys, and reviews.

5- Analytics

Marketing Analytics: Connect all your marketing data and KPIs automatically. Empower your teams to complete and share their advanced analysis with ease. Act on your data to manage campaigns, trigger alerts and improve your marketing efficiency. Achieve higher results in return on marketing investment.

PR Analytics: Learn from, analyze, and measure your PR efforts. These solutions track media activity and provide insights into PR efforts to highlight what is driving engagement, traffic, and revenue.

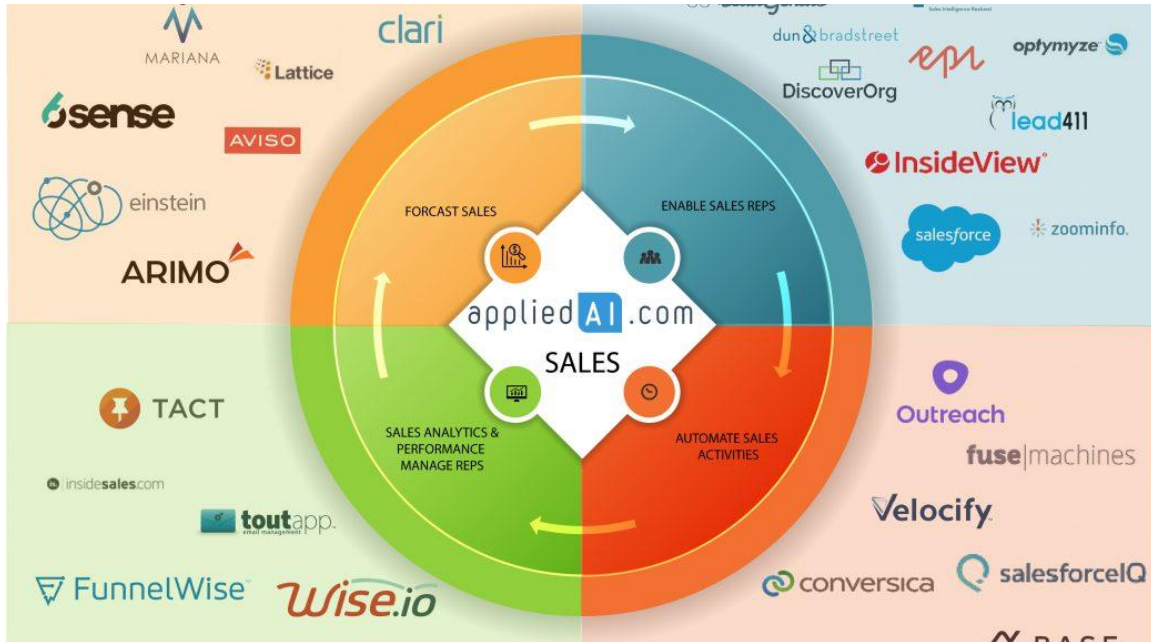
Social Media Monitoring: Leverage machine learning & natural language processing to monitor social media to make real-time business decisions. Analyze the momentum and emerging trends in your customers for product development or marketing campaign.

Emotion Recognition: Capture the emotional state of your customer by analyzing micro gestures and mimics. Computer vision will help you to capture the details and provide you with the real emotions of your customer.

You can check out [our complete guide](#) on the topic as well.

Sales

There are 4 areas of sales where AI is making an impact. We listed these areas along with major players in the area:



1- Forecast Sales

Sales Forecasting: AI allows automatic and accurate sales forecast based on all customer contacts and previous sales outcomes. Automatically forecast sales accurately based on all customer contacts and previous sales outcomes. Give your sales personnel more sales time while increasing forecast accuracy

2- Enable Sales Reps

Lead generation: Use a comprehensive data profile of your visitors to identify which companies your sales reps need to connect to. Generate leads for your sales reps leveraging databases and social networks

Sales Data Input Automation: Data from various sources will be effortlessly and intelligently copied into your CRM. Automatically sync calendar, address book, emails, phone calls and messages of your salesforce to your CRM system. Enjoy better sales visibility and analytics while giving your sales personnel more sales time.

Predictive sales/lead scoring: Use Artificial Intelligence to enable predictive sales. Score leads and prioritize sales rep actions based on lead scores and contact factors. Sales forecasting is automated with increased accuracy thanks to systems' granular access to lead scores and sales rep performance. To score

leads, these systems leverage anonymized transaction data from their customers, sales data of this specific customer. To assess contact factors these systems leverage anonymized data and analyze all customer contacts such as email and calls.

Sales Rep Response Suggestions: AI will suggest responses during live conversations or written messages with leads. Bots will listen in on agents' calls suggesting best practice answers to improve sales effectiveness

Sales Rep Next Action Suggestions: Your sales reps actions and leads will be analyzed to suggest the next best action. This situation wise solution will help your representatives to find the right way to deal with the issue. Historical data and profile of the agent will help you to achieve higher results. All leading to more customer satisfaction.

Sales Content Personalization and Analytics: Preferences and browsing behavior of high priority leads are analyzed to match them with the right content, aimed to answer their most important questions. Personalize your sales content and analyze its effectiveness allowing continuous improvement.

Prescriptive Sales: Most sales processes exist in the mind of your sales reps. Sales reps interact with customers based on their different habits and observations. Prescriptive sales systems prescribe the content, interaction channel, frequency, price based on data on similar customers.

3- Automate Sales Activities

Sales Rep Chat/ Email Bot: Chatbots are ideal to answer first customer questions. if the chatbot decides that it can not effectively serve the customer, it can pass those customers to human agents. Let 24/7 functioning, intelligent, self-improving bots handle making initial contacts to leads. High value, responsive leads will be called by live agents increasing sales effectiveness.

Retail Sales Bot: Use bots on your retail floor to answer customer's questions and promote products. Engage with the right customer by analyzing the profile. Computer vision will help you to provide the right action depending on the characteristics and mimics of the customer.

Meeting Setup Automation (Digital Assistant): Leave a digital assistant to set up meetings freeing your sales reps time. Decide on the targets to prioritize and keep your KPI's high.

4- Sales Analytics

Customer Sales Contact Analytics: Analyze all customer contacts including phone calls or emails to understand what behaviors and actions drive

sales. Advanced analytics on all sales call data to uncover insights to increase sales effectiveness

Sales Call Analytics: Advanced analytics on call data to uncover insights to increase sales effectiveness. See how well your conversation flow performs. Integrating data on calls will help you to identify the performance of each component in your sales funnels.

Sales attribution: Leverage big data to attribute sales to marketing and sales efforts accurately. See which step of your sales funnel performs better. Pinpoint the low performing part by the insights provided by analysis.

Sales Compensation: Determine the right compensation levels for your sales personnel. Decide on the right incentive mechanism for the sales representatives. By using the sales data, provide objective measures and continuously increase your sales representatives performance.

For more details on how AI is changing sales, you can check out [our more comprehensive guide](#).

Customer Service

We have identified AI implementation opportunities in customer service activities from taking customer complaints to analyzing results of customer service efforts.

Social Listening & Ticketing: Leverage Natural Language Processing and machine vision to identify customers to contact and respond to them automatically or assign them to relevant agents increasing customer satisfaction. Use the data available in social networks to uncover who to sell and what to sell.

Intelligent Call Routing: Route calls to most capable agent available. Intelligent routing systems incorporate data from all customer interactions optimizing customer satisfaction. Based on the customer profile and your agent's performance make it possible to provide the right service with the right agent. Reach superior net promoter scores.

Call Classification: Leverage Natural Language Processing to understand what customer is trying to achieve enabling your agents to focus on higher value-added activities. Before channeling the call, detect the nature of your customers' needs and let the right department handle the problem. Enhancing efficiency with higher satisfaction rates.

Voice Authentication: Authenticate customers without passwords leveraging biometry to improve customer satisfaction and reduce issues related to forgotten passwords. Their unique voice id will be their most secure key for accessing confidential information. Instead of last four digits of SSN, customers will gain access by using their own voice.

Call Intent Discovery: Leverage Natural Language Processing and machine learning to estimate and manage customer's intent (e.g. churn) to improve customer satisfaction and business metrics. Sentiment analysis through the customer's voice level and pitch. Detect the micro-emotions that drive the decision-making process.

Customer Service Response Suggestions: Bots will listen in on agents' calls suggesting best practice answers to improve customer satisfaction and standardize customer experience. Increase upsells and cross-sells by giving the right suggestion. Responses will be standardized, and best possible approach will serve the benefit of the customer.

Chatbot: Let 24/7 functioning, intelligent, self-improving chatbots to handle most queries and transfer customers to live agents when needed. Reduce customer service costs and increase customer satisfaction.

Customer Service Chatbot (Self – Service Solution): Build your own 24/7 functioning, intelligent, self-improving chatbots to handle most queries and

transfer customers to live agents when needed. Reduce customer service costs and increase customer satisfaction. Reduce the traffic on your existing customer representatives and make them focus on more specific needs of your customer.

Call Analytics: Advanced analytics on call data to uncover insights to improve customer satisfaction and increase efficiency. Find patterns and optimize your results. Analyze customer reviews through voice data and pinpoint where there is room for improvement.

Survey & Review Analytics: Leverage Natural Language Processing to analyze text fields in surveys and reviews to uncover insights to improve customer satisfaction and increase efficiency. Automate the process by mapping the right keywords with right scores. Making it possible to lower the time for generating reports.

Customer Contact Analytics: Advanced analytics on all customer contact data to uncover insights to improve customer satisfaction and increase efficiency. Utilize Natural Language Processing for higher customer satisfaction rates.

Chatbot Analytics: Analyze how customers are interacting with your chatbot. See the overall performance of your chatbot. Pinpoint its shortcomings and improve your chatbot. Detect the overall satisfaction rate of your customer with the chatbot.

Chatbot Testing: Semi-automated and automated testing frameworks facilitate bot testing. See the performance of your chatbot before deploying. Save your business from catastrophic chatbot failures. Detect the shortcomings of your conversational flow.

Data

Data is integral to any artificial intelligence, machine learning or data science related efforts of your company. Even if your company relies only on vendors' solutions in these fields, those solutions will work based on your data. Therefore it is critical to get your companies data collection, quality management and monitoring efforts right.

Data Preparation Platform: Prepare your data from raw formats with data quality problems to a clean, ready to analyze format. Use extract, transform and load (ETL) platforms to fine tune your data before placing it into a data warehouse.

Data Cleaning & Validation Platform: Avoid garbage in, garbage out by ensuring the quality of your data with appropriate data cleaning processes and tools. Automate the validation process by using external data sources. Regular maintenance cleaning can be scheduled, and quality of the data can be increased.

Data Labeling: Unless you use unsupervised learning systems, you need high quality labeled data. Label your data to train your supervised learning systems. Human-in-the-loop systems auto label your data and crowdsource labeling data points that cannot be auto-labeled with confidence.

Data Integration: Combine your data from different sources into meaningful and valuable information. Data traffic depends on multiple platforms. Therefore, managing this huge traffic and structuring the data into meaningful format will be important. Keep your data lake available for further analysis.

Data Transformation: Transform your data to prepare it for advanced analytics. If it is unstructured adjust it for the required format.

Appdev: App development platforms for your custom projects. Your in-house development team can create original projects for your specific business needs. These platforms will help your team with the necessary tools.

Data Management & Monitoring: Keep your data high quality for advanced analytics. Adjust the quality by filtering the incoming data. Save time by automating manual and repetitive tasks.

Analytics

AI and machine learning techniques are the drivers behind the explosion of analytics capabilities. We structure analytics solutions in 2 categories:

1- Generalist solutions

Analytics Platform: Empower your employees with unified data and tools to run advanced analyses. Quickly identify problems and provide meaningful insights.

Analytics Services: Satisfy your custom analytics needs with these e2e solution providers. Vendors are there to help you with your business objectives by providing turnkey solutions.

2- Specialized solutions

Geo-Analytics Platform: Enables analysis of granular satellite imagery for predictions. Leverage spatial data for your business goals. Capture the changes in any landscape on the fly.

Conversational Analytics: Use conversational interfaces to analyze your business data. Natural Language Processing is there to help you with voice data and more. Automated analysis of reviews and suggestions.

Data Visualization: Visualize your data for better analytics and decision making. Let the dashboards speak. Convey your message more easily and more esthetically.

Real-Time Analytics: Real-Time analytics for your time-sensitive decisions. Act timely and keep your KPI's intact. Use machine learning to explore unstructured data without any disruptions.

Image Recognition and Visual Analytics: Analyze visual data with advanced image and video recognition systems. Meaningful insights can be derived from the data piles of images and videos.

E-Commerce Analytics: Specialized analytics systems designed to deal with the explosion of e-commerce data. Optimize your funnel and customer traffic to maximize your profits.

FinTech

Finance at its heart requires two things to work: trust and decision making under uncertainty. Financial institutions need to be trusted to receive deposits and they need to be good decision makers to match those deposits with ventures that need them. AI systems improve decision making, allowing financial institutions to allocate capital more efficiently.

Fraud Detection: Leverage machine learning to detect fraudulent and abnormal financial behavior, and/or use AI to improve general regulatory compliance matters and workflows. Lower your operational costs by limiting your exposure to fraudulent documents.

Insurance & InsurTech: Leverage machine learning to quote optimal prices, manage claims effectively and improve customer satisfaction while reducing costs. Detect your customer's risk profile and provide the right plan.

Financial Analytics Platform: Leverage machine learning, Natural Language Processing, and other AI techniques for financial analysis, algorithmic trading, and other investment strategies or tools.

Expense Reporting: Use machine learning to improve basic business accounting, including expense reporting. Reduce approval workflows and processing cost for per unit.

Credit Lending & Scoring: Use AI for robust credit lending applications. Use predictive models to uncover the potentially non-performing loans and act. See the potential credit scores of your customers before they apply for a loan and provide custom tailored plans.

Billing: Leverage accessible billing services that remind your customers to pay. Increase your loan recovery ratios. Use automated invoice systems for your business.

Robo-Advisory: Use AI chatbot and mobile app assistant applications to monitor personal finances. Set your target savings or spending rates for your own goals. Your own finance assistant will handle the rest and provide you with insights to reach financial targets.

Regulatory Compliance: Use Natural Language Processing to quickly scan legal and regulatory text for compliance issues, and do so at scale. Handle thousands of paperwork, without any human interaction.

Data Gathering: Use AI to efficiently gather external data such as sentiment and other market-related data. Wrangle data for your financial models and trading approaches.

Debt Collection: Leverage AI to ensure compliant and efficient debt collection process. Effectively handle any dispute and see your success right in debt collection.

HealthTech

Human is potentially the most complex machine. There are too many things to know and too much interaction between diverse components of the human machine. Systems powered by AI techniques identify hard-to-detect patterns and enable new breakthroughs in medicine and improve decision making in healthcare.

Patient Data Analytics: Analyze patient and/or 3rd party data to discover insights and suggest actions. Greater accuracy by assisted diagnostics. Lower the mortality rates and increase the patient satisfaction by using all the diagnostic data available to detect the underlying reasons for the symptoms.

Personalized Medications and Care: Find the best treatment plans according to patient data. Provide custom-tailored solutions for your patients. By using their medical history, genetic profile, you can create a custom medication or care plan.

Drug Discovery: Find new drugs based on previous data and medical intelligence. Lower your R&D cost and increase the output. All leading to greater efficiency. Integrate FDA data and you can transform your drug discovery by locating market mismatches and FDA approval or rejection rates.

Real-Time Prioritization and Triage: Prescriptive analytics on patient data enabling accurate real-time case prioritization and triage. Manage your patient flow by automatization. Integrate your call center and use language processing tools to extract the information, prioritize patients that need urgent care and lower your error rates. Eliminate error-prone decisions by optimizing patient care.

Early Diagnosis: Analyze chronic conditions leveraging lab data and other medical data to enable early diagnosis. Provide a detailed report on the likelihood of development of certain diseases with genetic data. Integrate the right care plan for eliminating or reducing the risk factors.

Assisted or Automated Diagnosis & Prescription: Suggest the best treatment based on the patient complaint and other data. Put in place control mechanisms that detect and prevent possible diagnosis errors. Find out which active compound is most effective against that specific patient. Get the right statistics for a superior care management.

Pregnancy Management: Monitor mother and fetus health to reduce mothers' worries and enable early diagnosis. Use machine learning to quickly uncover potential risks and complications. Lower the rates of miscarriage and pregnancy-related diseases.

Medical Imaging Insights: Advanced medical imaging to analyze and transform images and model possible situations. Use diagnostic platforms equipped with high image processing capabilities to detect the possible diseases.

Healthcare Market Research: Prepare hospital competitive intelligence by tracking the market prices. See the available insurance plans, drug prices, and many more public data to optimize your services. Leverage NLP tools to analyze the vast size of unstructured data.

Healthcare Brand Management and Marketing: Create an optimal marketing strategy for the brand based on market perception and target segment. Tools that offer high granularity will allow you to reach the specific target and increase your sales.

Gene Analytics and Editing: Understand gene and its component. Predict the impact of gene edits. Before using gene therapy, use models to uncover what are the possible outcomes and find other solutions.

Device and Drug Comparative Effectiveness: Analyze drug and medical device effectiveness. Rather than just using simulations, test on other patient's data to see the effectiveness of the new drug, compare your results with benchmark drugs to make an impact with the drug.

HR

While HR will always require human touch, machines are also getting good at understanding how your employees see your company, helping them resolve simple HR related problems and predicting which employees can be good fits for your company.

Hiring: Hiring is a prediction game: Which candidate, starting at a specific position, will contribute more to the company? Machine's better data processing capabilities augment HR employees in various parts of hiring such as finding qualified candidates, interviewing them with bots to understand their fit or evaluating their assessment results to decide if they should receive an offer

Performance Management: Manage your employees' performance effectively and fairly without hurting their motivation. Follow their KPI's on your dashboard and provide real-time feedback. This would increase the employee satisfaction and lower your organization's employee turnovers. Actualize your employee's maximum professional potential with right tools.

HR Retention Management: Predict which employees are likely to churn and improve their job satisfaction to retain them. Detect the underlying reasons for their motive for seeking new opportunities. By keeping them at your organization, lower your human capital loss.

HR Analytics: HR analytics services is like the voice of employee analysis. See your people analytics and make better people decisions. Gain actionable insights and impactful suggestions for higher employee satisfaction.

Digital Assistant: Digital assistants are mature enough to replace real assistants in email communication. Include them in your emails to schedule meetings. They have already scheduled hundreds of thousands of meetings. Use the power of artificial intelligence in your day to day activities. Your own on-demand powerful AI backed assistant helping you 24/7.

Employee Monitoring: Monitor your employees for better productivity measurement. Provide objective metrics to see how well they function. Forecast their overall performance with the availability of massive amounts of data.

IT

IT has already seen waves of automation however, major IT problems remain in the area of security. Another emerging challenge is implementing AI technologies into your company's products. Thankfully, a myriad of tech giants and startups are providing technology teams the tools and services to build features powered by AI.

[Analytics & Predictive Intelligence for Security](#): Analyze data feeds about the broad cyber activity as well as behavioral data inside an organization's network to come up with actionable insights to help analysts predict and thwart impending attacks. Integrate external data sources the watch out for global cyber threats and act timely. Keep your IT infrastructure intact or minimize losses.

[Knowledge Management](#): Enterprise knowledge management enables effective and effortless storage and retrieval of enterprise data, ensuring organizational memory. Increased collaborative work by ensuring right individuals works with right data. Seamless organizational integration through knowledge management platforms.

[Natural Language Processing Library/ SDK/ API](#): Leverage Natural Language Processing libraries/SDKs/APIs to quickly and cost-effectively build your custom NLP powered systems or to add NLP capabilities to your existing systems. In-house team will gain experience and knowledge regarding the tools. Increased development and deployment capabilities for your enterprise.

[Image Recognition Library/ SDK/ API](#): Leverage image recognition libraries/SDKs/APIs to quickly and cost-effectively build your custom image processing systems or to add image processing capabilities to your existing systems.

[Secure Communications](#): Protect employee communications like emails or phone conversations with advanced multilayered cryptography & ephemerality. Keep your industry secrets safe from corporate espionage.

[Deception Security](#): Deploy decoy-assets in a network as bait for attackers, to identify, track, and disrupt security threats such as advanced automated malware attacks before they inflict damage. Keep your data and traffic safe by keeping them engaged in decoys. Enhance your cybersecurity capabilities against various forms of cyber attacks

[Autonomous Cybersecurity Systems](#): Utilize learning systems to efficiently and instantaneously respond to security threats, often augmenting the work of security analysts. Lower your risk of human errors by providing greater autonomy for your cybersecurity. AI backed systems can check the compliance with standards.

Smart Security Systems: AI-powered autonomous security systems. Functioning 24/7 for achieving maximum protection. Computer vision for detecting even the tiniest anomalies in your environment. Automate emergency response procedures by instant notification capabilities.

Machine Learning Library/ SDK/ API: Leverage machine learning libraries/SDKs/APIs to quickly and cost-effectively build your custom learning systems or to add learning capabilities to your existing systems.

AI Developer: Develop your custom AI solutions with companies experienced in AI development. Create turnkey projects and deploy them to the specific business function. Best for companies with limited in-house capabilities for artificial intelligence.

Deep Learning Library/ SDK/ API: Leverage deep learning libraries/SDKs/APIs to quickly and cost-effectively build your custom learning systems or to add learning capabilities to your existing systems.

Developer Assistance: Assist your developers using AI to help them intelligently access the coding knowledge on the web and learn from suggested code samples. See the best practices for specific development task and formulate your custom solution. Real-time feedback provided by the huge history of developer mistakes and best practices.

AI Consultancy: Provides consultancy services to support your in-house AI development including machine learning and data science projects. See which units can benefit most from AI deployment. Optimize your artificial intelligence spending for best results from the insight provided by a consultant.

Operations

There are numerous automation opportunities in operations in areas such as:

Back office automation

Robotic Process Automation (RPA): Digitize your processes in weeks without replacing legacy systems which can take years. Bots can operate on legacy systems learning from your personnel's instructions and actions. Increase your efficiency and profitability ratios. Increase speed and precision and many more.

Robotic Process Automation (RPA) Implementation: Implementing RPA solutions requires effort. Suitable processes need to be identified. If a rules-based robot will be used, the robot needs to be programmed. Employees' questions need to be answered. That is why most companies get some level of external help. Generally, outsourcing companies, consultants, and IT integrators are happy to provide the temporary labor to undertake this effort.

Industrials

Predictive Maintenance: Predictively maintain your robots and other machinery to minimize disruptions to operations. Implement big data analytics to estimate the factors that are likely to impact your future cash flow. Optimize PP&E spending by gaining an insight regarding the possible factors.

Manufacturing Analytics: Also called industrial analytics systems, these systems allow you to analyze your manufacturing process from production to logistics to save time, reduce cost and increase efficiency. Keep your industry effectiveness at optimal levels.

Inventory & Supply Chain Optimization: Leverage machine learning to take your inventory & supply chain optimization to the next level. See the possible scenarios in different customer demands. Reduce your stock keeping spending and maximize your inventory turnover ratios. Increase your impact factor in the value chain.

Robotics: Factory floors are changing with programmable collaborative bots that can work next to employees to take over more repetitive tasks. Automate physical processes such as manufacturing or logistics with the help of advanced robotics. Increased your connected systems by centralizing the whole manufacturing process. Lower your exposures to human errors.

Collaborative Robot: Cobots provide a flexible method for automation. Cobots are flexible robots that learn by mimicking human workers' behavior. Smart engineering systems for solutions still requiring human oversight.

Other

Cashierless Checkout: Self-checkout systems have many names. They are called cashierless, cashier-free or automated checkout systems. They allow retail companies to serve customers in their physical stores without the need for cashiers. Technologies that allowed users to scan and pay for their products have been used for almost a decade now and those systems did not require great advances in AI. However, these days we are witnessing systems powered by advanced sensors and AI to identify purchased merchandise and charge customers automatically.

Building Management: Sensors and advanced analytics improve building management. Integrate IoT systems in your building for lower energy consumption and many more. Increase the available data by implementing the right data collection tools for a effective building management.

Self-Driving Cars

In the next decades, every transportation machine including cars, ships and planes will achieve complete or nearly complete autonomy. There are a variety of technologies focusing on different aspects of this autonomous mobility revolution.

Self-Driving Cars: From mining to manufacturing, self-driving cars/vehicles are increasing efficiency and effectiveness of operations. Integrate them into your business for greater efficiency. Leverage the power of artificial intelligence for complex tasks.

Vehicle Cybersecurity: Secure connected and autonomous cars and other vehicles with intelligent cybersecurity solutions. Guarantee your safety by hack-proof mechanisms. Protect your intelligent systems from attacks.

Vision Systems: Vision systems for self-driving cars. Integrate vision sensing and processing in your vehicle. Achieve your goals with the help of computer vision.

Driving Assistant: Required components and intelligent solutions to improve rider's experience in the car. Implement AI-Powered vehicle perception solutions for the ultimate driving experience.

Conclusion

Our aim in this document was to demonstrate you the power of AI and how it can transform your business.

Next, I would recommend identifying top use cases for your business and identifying how you can use internal resources and vendors to run PoCs and see effectiveness of these use cases.

If where you can start is not clear, [let us know](#). We have worked with Fortune 500 companies, unicorn startups or large companies. We can help you outline your company's AI strategy, prepare your AI implementation road map and identify the right partners for your business' AI projects.

Additional resources

Complete list of AI use cases according to business functions or industries

<https://appliedai.com/use-cases/1>

<https://appliedai.com/sectors>

AI vendors list

<https://appliedai.com/vendors/1>

For more information, please contact info@appliedai.com

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