

AI REVOLUTIONIZING THE FUTURE OF BUSINESS IN THE UNITED STATES

Watching. Thinking. Sensing. Doing.




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INTRODUCTION

Many people still associate AI with science-fiction dystopias, but that characterization is waning as AI develops and becomes more commonplace in our daily lives. Today, artificial intelligence is a household name – and sometimes even a household presence (hi, Alexa!). In business, artificial intelligence has a wide range of uses. From the mundane to the breathtaking, artificial intelligence is already disrupting virtually every business process in every industry. As AI technologies proliferate, they are becoming imperative to maintain a competitive edge.

The corporate world looks at AI through the lens of business capabilities rather than technologies. Broadly speaking, AI can support important business needs like automating business processes, and gaining insight through data analysis.

AI is adept at processing and analyzing troves of data much faster than a human brain can. Artificial intelligence software can then return with synthesized courses of action and present them to the human user. In this way, we can use AI to help game out possible consequences of each action and streamline the decision-making process.

The adoption of AI in mainstream business operations is a new phenomenon it is changing every industry & business operation, which is increasing the interest in AI, & its subdomains like Machine Learning, Deep learning, & Computer Vision. The right technology can dramatically transform any business and AI will indeed lead to increased levels of productivity, specialization in job roles, & better customer service.

WHAT IS AI?

Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems. In a broader term, it refers to any type of software that engages in human-like activities like learning, planning & problem-solving.

When we talk about Computer Vision (a subset of AI), it is the AI ability to power the systems with a pair of eyes that never sleep. The human visual perception has stages like **stimulation, organization, interpretation, memory, and recall**. Computer Vision exactly simulates this process to replace the synchronization of human eyes and brain for **reception, transduction, transmission, selection, organisation, interpretation and remember**.

According to a study done by OpenAI the amount of computing power used in AI training has **doubled every 3.4 months**. This is a massive, almost impossible acceleration dissimilar to any typical evolution. The future is coming quickly, and artificial intelligence will certainly be a part of it. As this technology develops, the world will see new start-ups, and several business applications heavily relying on this new technology.



THE RISE OF AI: AI AND BUSINESS TODAY

Artificial Intelligence, machine learning, deep learning and computer vision are the most buzzed words in today's business world, but what do they actually mean for your business? Rather than being a replacement for human intelligence, artificial intelligence generally serves as a supporting tool.

AI technologies are now valuable throughout many industries, giving businesses the provision to deploy them to attain real-world benefits.

Such benefits are leading to business growth & advantages; such as:

- Automate business processes
- Improve efficiency & increase productivity
- Quick & accurate business operations
- Real-time tracking & instant alerts
- 24/7 operation
- Improve customer relationships & experience
- Reduce the manhours on repetitive tasks
- Higher ROI from technology investments

Recent advances in AI technology have enabled systems to 'see' images and videos and analyze them at high level-in some cases even better than human eye. With Artificial Intelligence, businesses can now effectively understand & engage customers, automate business processes and improve productivity & revenue while reducing operational expenses. Today most innovative companies, both small enterprises & large establishments, are on the path of adopting AI & related technologies into their business. Are you one of them? If not, you need to get started now.



According to recent McKinsey survey,

56% of organizations are using AI in at least one business function.

According to Semrush,
the forecasted annual growth rate of AI between 2020 and 2027 is **33.2%**



IDENTIFYING BUSINESS CHALLENGES & DEVELOP AI ROADMAP

If you're reading this, you have presumably identified the challenges that are weighing your business down and recognize areas around which you need to deploy the latest technology. All you need is the right strategy and the right technology to be implemented in order to scale your business.

AI OPPORTUNITIES & USE CASES

Artificial Intelligence can be adapted & applied to different business operations. Today is the digital era & AI technology is an important investment area. Many business giants like Amazon, Google, Microsoft, and Apple are already investing heavily in AI. This is definitely a trending technology and every business that plans to modernize needs AI. No matter which industry you are in, AI has a wide range of potential use cases for you.



As per market research report of Tratica,

over **330** Artificial Intelligence use cases across **28** industries will contribute to the market with strong enterprise AI opportunity in automotive, consumer, healthcare, banking and financial, telecommunications, education, and retail and e-commerce.



APPLICATION INDUSTRIES & IMPORTANT USE CASES

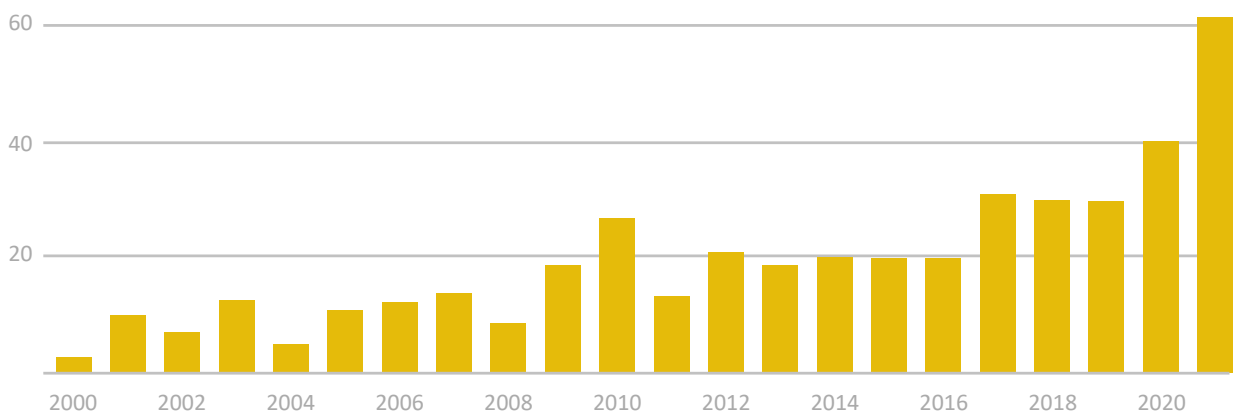
Safety & Security with AI

- Monitor work areas for safety equipment
- Use digital barriers to protect restricted areas
- Gun & weapon detection
- Vehicle seal detection
- Detecting health hazards like fire, pillage or bad light
- Line detection & crowd formation
- AI drones for security, inspection & surveillance

Active shootings

are one of the most severe crises the United States faces, creating a wide range of complex challenges for safety and security.

'Active shooter' incidents in the United States



Gun Violence

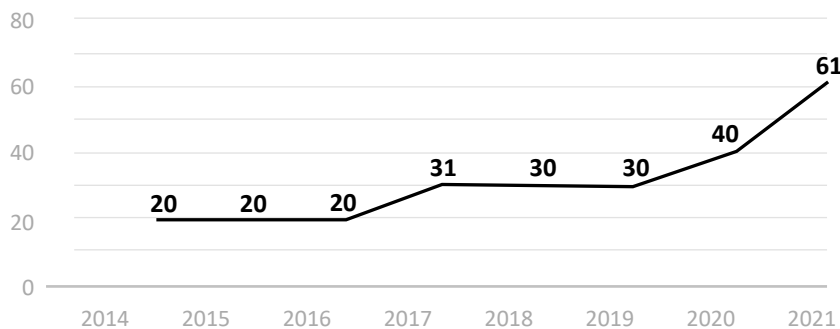
SHOOTINGS IN US ON THE RISE



There were **61 active shooter incidents** in the US in 2021, according to the FBI- a 52% percent increase from the previous year and the highest on record.



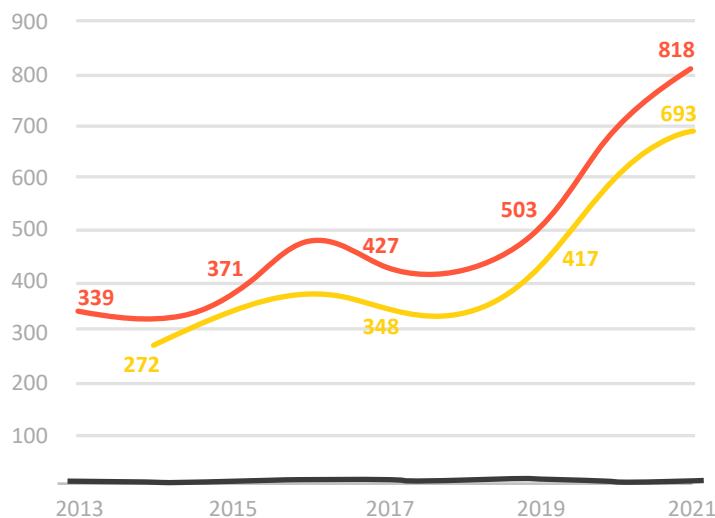
Active shootings across the US (2014-2021)



● FBI active shooters

One or more individuals actively engaged in killing or attempting to kill people in populated area.

Mass shootings across the US (2013-2021)



● Mass Shooting Tracker

● Gun Violence Archive

● Everytown for Gun Safety

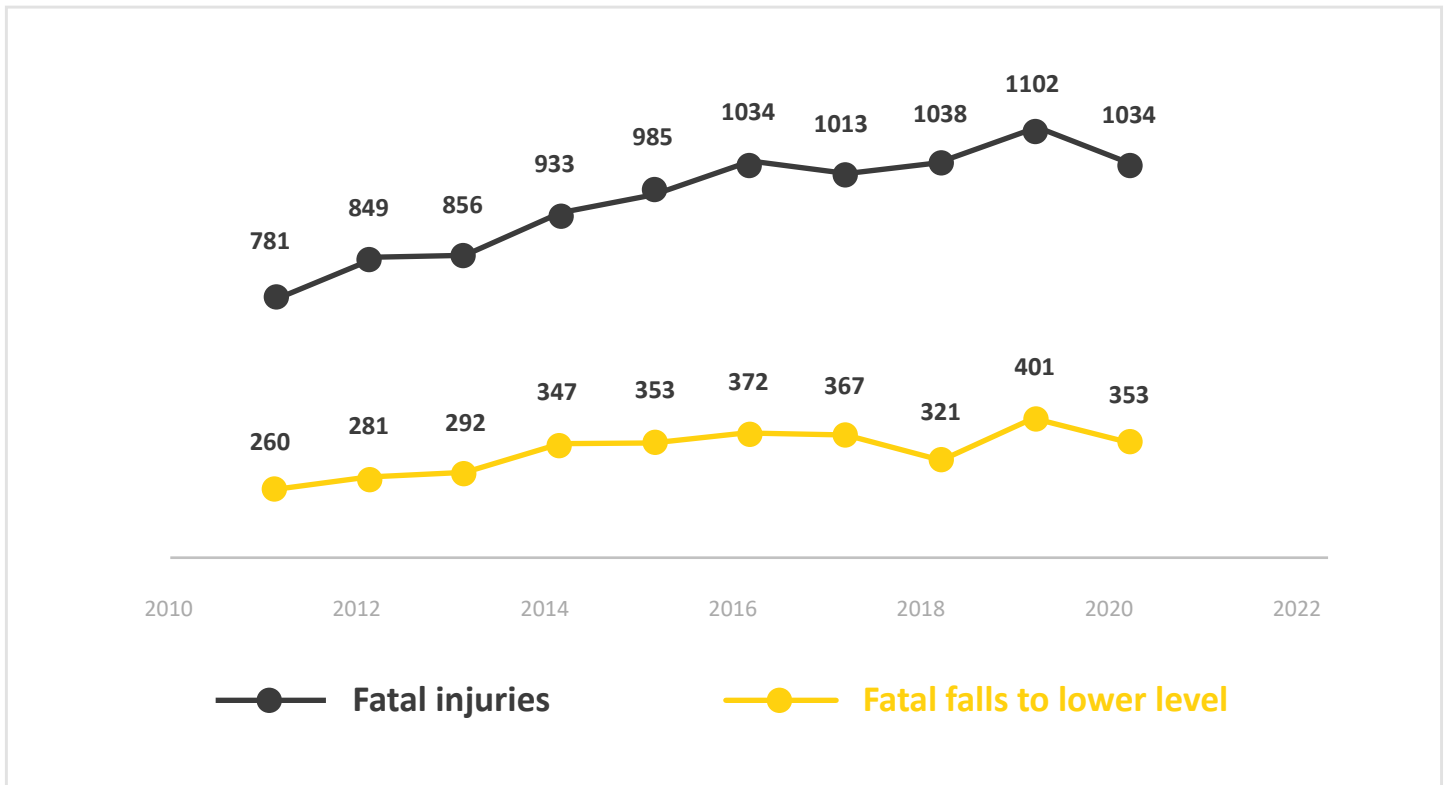
Manufacturing with AI

- Defect Detection
- Predictive Maintenance
- Overload Protection
- Detecting Cargo Mishandling
- Improve Quality Control
- Employee Productivity Tracking
- Automatic Packet Counting
- Safety Gear & PPE Detection
- Occupational Injury Prevention



As per OSHA,

5000+ manufacturing workers on an average die on the job every year.





As per US department of Labor,

around **20-30%** of slip-and-fall accidents at workplace cause moderate to severe injuries, such as broken bones, head injuries, & spinal cord injuries.

In 2019,

more than **100 deaths** each week in US work industry are due to workplace accidents.



Retail with AI

- Inventory Management
- Shrinkage Elimination
- Detect Suspicious Behaviour
- Track Customer Behaviour & Patterns
- Queue Management
- Monitor Waiting Time
- Store Layout Optimization
- Employee Performance Monitoring



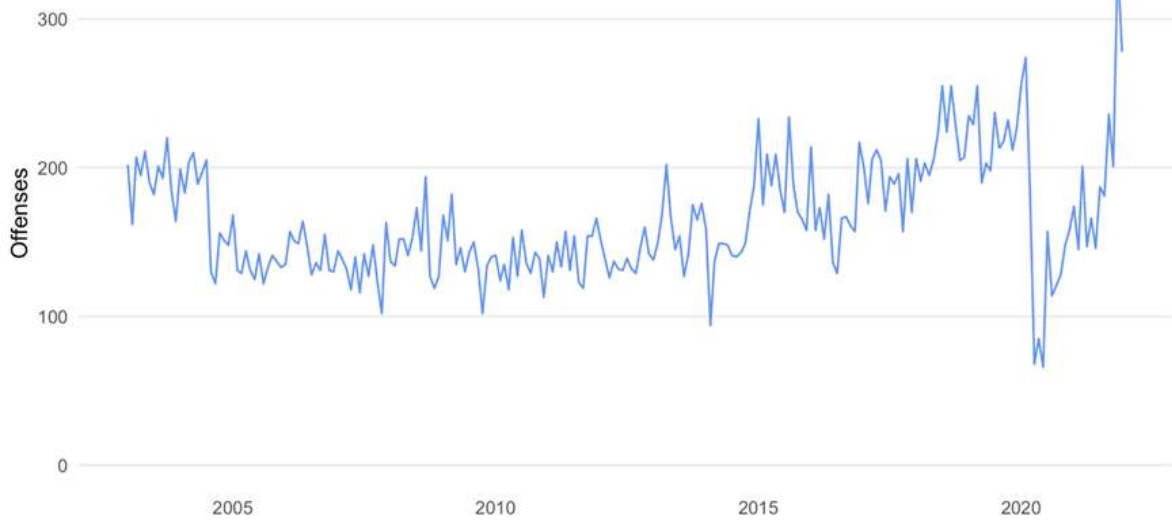
According to Fortune Business Insights,

retail market size of global artificial intelligence in 2018 was \$2,306.8 and is expected

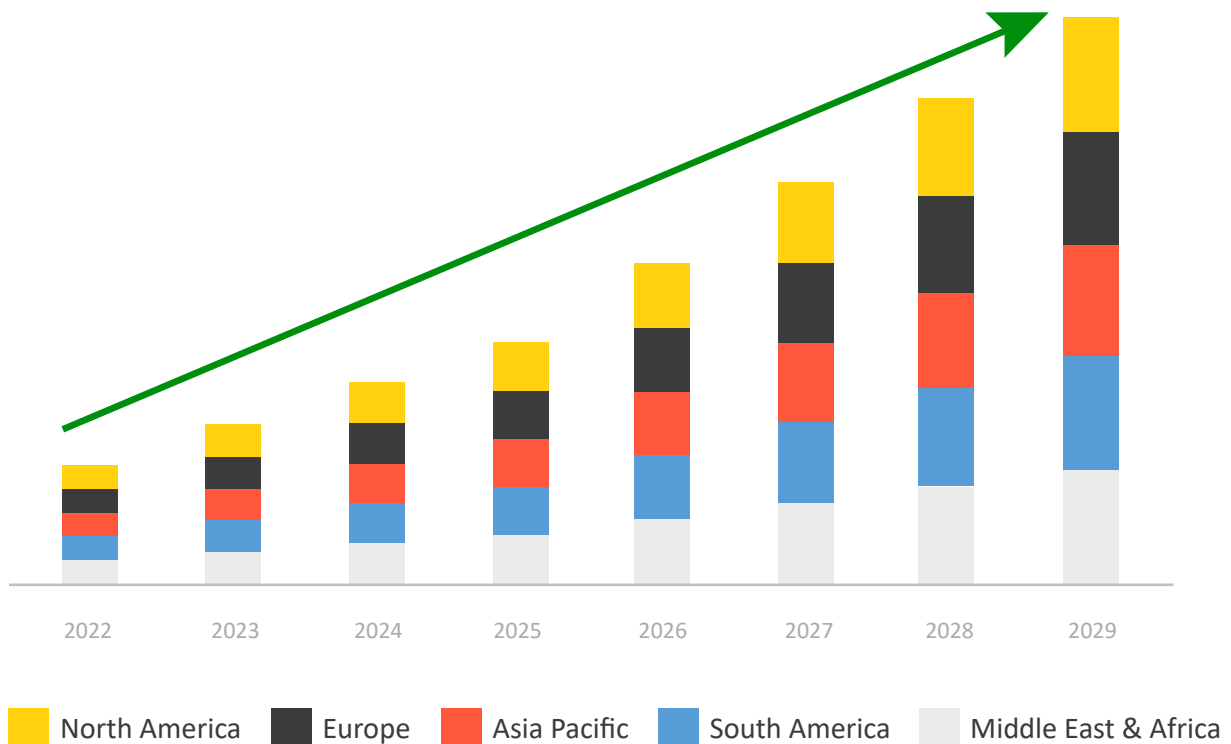
to **grow up to \$23,426.3** by 2026.



Shoplifting Offenses in SF Monthly Incidents, 2003-2021



Global Deep Learning in Machine Vision is expected to account for USD 9,262.40 Million by 2029



Warehousing with AI

- Object & People Detection
- Automatic License Plate recognition
- Automatic Packet Counting
- Anomaly & Human Intrusion
- Detection Fire or Hazardous Incidents
- Detection Dock & Forklift Utilization
- Workforce Utilization



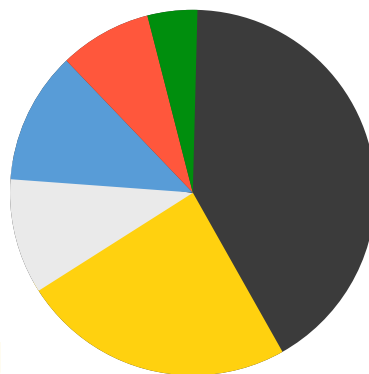
As per OSHA, the number of forklift-related accidents totals nearly **100,000** per year. **11%** of forklifts in the U.S are involved in an accident each year.



85 people are killed in forklift accidents every year in US.



Forklift accident statistics



- 42% Crushed by vehicle tipping over
- 25% Crushed between vehicle and a surface
- 11% Crushed between two vehicles
- 10% Struck or run over by forklift
- 8% Struck by falling material
- 4% Fall from platform of the forks

Forklift accidents have affected **888,220 people** between 2011 and 2019.

Source: National Safety Council



“
One in six of all workplace accidents have a fatal outcome.

”
34,900 are seriously injured in US every year.

The cost per year is **USD 135 million**.
”

OUR SOLUTION

If you are on or planning to begin your AI journey; AssertAI is here to help you. AssertAI will provide you with the expertise you need to start this journey of automation. Our AI-driven suite of tools takes the guesswork out as we empower your system with a pair of eyes that never sleep. We customize result-oriented AI solutions for you to have better business control & improve efficiency. Organizations already associated with us are using the power of AssertAI's solutions, to be a step ahead of their competition. Get started and beat your biggest business challenges with our AI solutions.

CONCLUSION

Artificial Intelligence has come a long way in transforming business by enabling organizations to work faster & better, and helping businesses to streamline & automate processes. AI facilitates the generation of next-generation workplace & the benefits that businesses stand to gain from the use of AI are endless. Organizations that fully adopt AI opportunities will go a step ahead of the competition and be successful in this era of digitally-driven businesses.