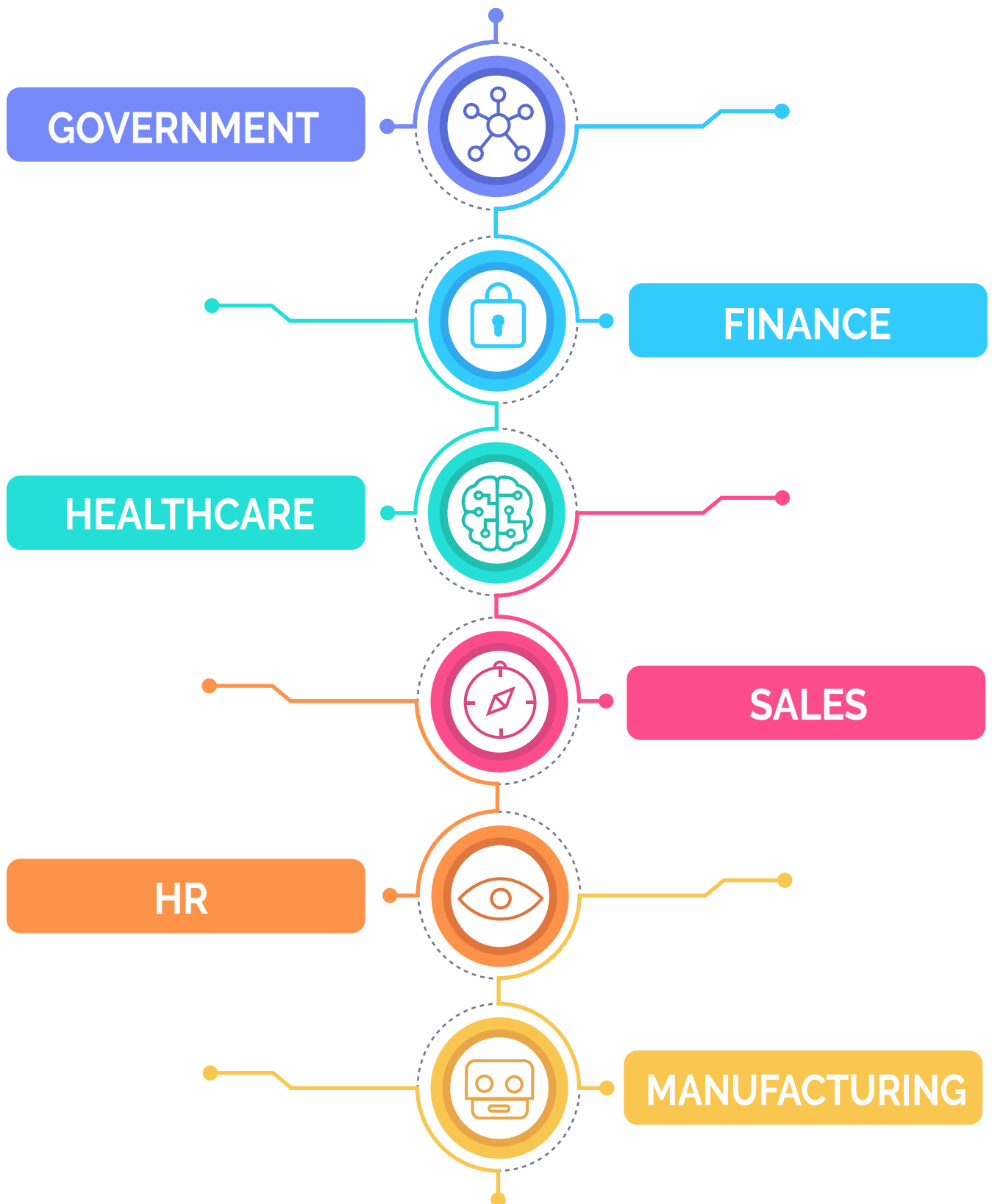




Use cases of **DATA SCIENCE** **ARTIFICIAL INTELLIGENCE** **MACHINE LEARNING**

Big Data, Machine Learning and Artificial intelligence is already changing industry landscapes, with early adopters reporting benefits in high-value business cases such as fraud detection, preventative maintenance, and recommendation engines. Yet working on an AI initiative is demanding for many enterprises, whether you're in the middle of the process or just getting started. This report provides use cases of successful implementations of Big data, machine learning and Artificial Intelligence. These use cases are just a few examples of how Machine learning and AI is affecting our world right now. Many effects of AI are unknown, but one thing is becoming clearer: the adoption of Big Data, Machine learning, AI technology—or lack of it—is going to define the future of the enterprise

Use cases of Data Science/AI/Machine Learning



GOVERNMENT

Use cases of Data Science/AI/Machine Learning in Government

Reduced commute time by 30% for 700,000 drivers

Detecting tax irregularities

Error detection in forms such as visa applications etc.,

Virtual assistant to answer questions from citizens and immigrants

Correctly analysing groups, individuals for welfare programs

Surveillance processes in traffic, police patrolling etc.,

Police assigned to patrol areas based on predictions

Detecting disease clusters based on medical data

Remote sensors for traffic violation detection

Detect when infrastructure needs repair and maintenance

Targeted intervention for at risk students

Address homelessness and economic issues

Address occupational injuries and illnesses based on past accidents

Track expenses, redundancies, wasteful or ill-conceived plans

Detect recidivism probabilities and make parole decisions

Video analytics at border control that can interpret facial sentiment and bodily disposition

FINANCE

Use cases of Data Science/AI/Machine Learning in Finance

50% increase in fraud detection
6% decrease in false - positive rate

Detect fraudulent and abnormal financial behavior

Financial analysis of stocks based on news and social media signals

Quote optimal prices for financial products

Decisions on credit lending

Reminders for payment for selected customers

Reminders for credit line increase for selected customers

Scan and analyse legal and regulatory text for compliance issues

Sentiment analysis and market data

Efficiency in debt collection

Anti money laundering investigations

Personal assistants and chatbots for services

Financial Model simulations

Trading patterns detection

HEALTHCARE

Use cases of Data Science/AI/Machine Learning in Healthcare

Mammograms
30 times faster
with 99%
accuracy



Diagnosis in Medical Imaging

Treatment Queries and Suggestions

Crowdsourced Medical Data Collection

Drug Discovery

Robotic Surgery

Personalized Medicine

Automatic Treatment or Recommendation

Proactive health prevention and intervention

Real-time prioritization and triage

Pregnancy Management

Patient Data Analytics

Gene analysis and editing

Device and drug comparative effectiveness

NLP for EHR and PDF images of faxed lab reports

SALES

Use cases of Data Science/AI/Machine Learning in Sales

75% of content
watched on
Netflix comes
from AI/ML
algorithms



Improving demand forecasting

Product assortment efficiency

Smart sourcing

Customized user experience

Lead scoring accuracy

Sales projections by customer segments

Sales offers by contextual content

Personalised advertising

Determine customer churn

Price optimisation and price elasticity

Sales data input automation

24/7 sales chatbots

Sales rep response suggestions

Sales rep next step suggestions

HR

Use cases of Data Science/AI/Machine Learning in HR

AI sourcing reduced time to hire from 34 days to 5 days



Applicant Tracking & Assessment

Recommending jobs

Attrition Detection

Identify rogue behaviour

Individual Skills Management

Performance-management engines

Determine ideal size for a given team

Better managing of maternity leave

Increased Behavior Tracking

Chatbot to answer employee queries

Screening resumes

Reduction of Bias and Promotion of Diversity

Schedule Management

MANUFACTURING

Use cases of Data Science/AI/Machine Learning in Manufacturing

Predictive maintenance with AI \$1.3 trillion by 2025



Smart manufacturing with IoT and Robotics

Monitor plants and spot inefficiencies

Sensors for pressure, stress and other variables

Production-as-a-service

Overall equipment efficiency

Supply chain and inventory management

Improving yields and quality

Demand forecasting

Predictive maintenance

Condition based manufacturing

Product customisation

Process visualisation and optimisation