Sapphire Insights

Global Use Cases of
Artificial Intelligence & Machine Learning
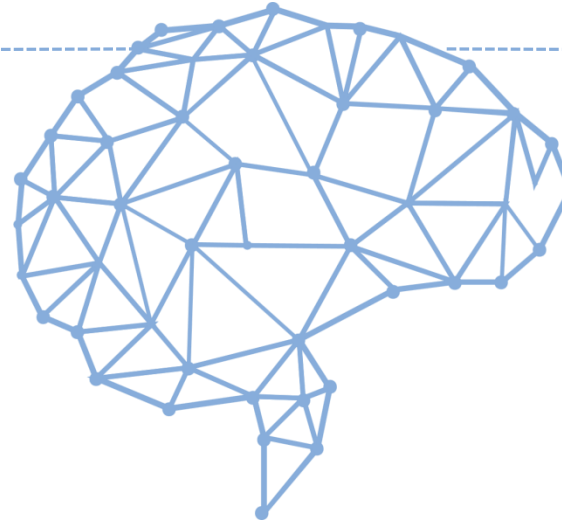in HR

June 2020

SAPPHIRE
HUMAN SOLUTIONS

Google

Using machine learning to improve HR department productivity

01

Google's People Analytics department was **the first one to explore the area of using machine learning** in human resources for enterprises.

02

HR systems at Google started capturing employees' interactions with HR and revealing patterns. **AI uses those patterns to improve future interactions** and create relevant information for other employees.

03

As more and more employees request the same information, **a base of knowledge is automatically created** by recognizing the queries, gathering the appropriate responses and providing the information requested without the help of a human agent.

04

Using AI in this fashion has two benefits: Employees will **receive the information they need immediately**, and human agents can focus on more productive tasks, rather than answering the same repetitive questions.

Tracking Employee Mood during a Hostile takeover

When Kraft Heinz launched a hostile takeover bid in early 2017, Unilever's workforce analytics team showed that analytics could be deployed in times of crisis.

The team analyzed networks in the organization, and create models to come up with potential cost reductions. The team was able to track the employees' moods and attitudes. These insights directly helped decision making during the crisis.

DBS

DBS Talent Acquisition team uses JIM (Jobs Intelligence Maestro) powered by AI

The DBS Talent Acquisition team started using JIM (Jobs Intelligence Maestro), a virtual recruitment bot powered by artificial intelligence used to conduct candidate screening for those applying to be wealth planning managers, a high volume job in the consumer bank.

Following the introduction of JIM in May 2018, DBS talent acquisition was able to:

- **Shorten the screening time** from 32 minutes per candidate to 8 minutes per candidate
- Improve completion rate of job application from **85% to 97%**
- **Respond to 96% of all candidate queries through JIM**, allowing recruiters to spend more time sharing the culture and values of DBS with candidates
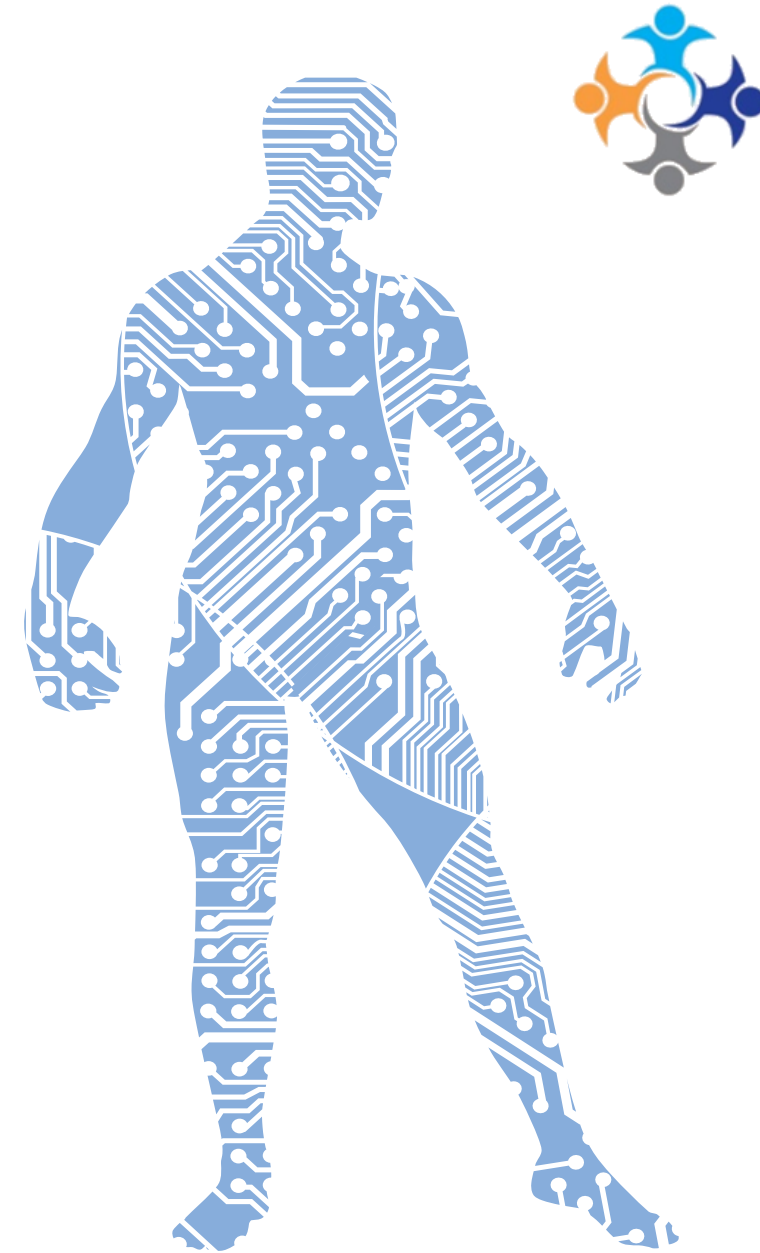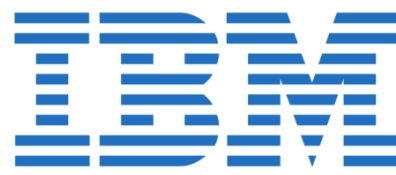
Using AI across HR to Manage Teams better

1 AI Powered Career Guidance

IBM wanted to provide high quality career guidance to all employees, regardless of level. The solution developed is a personal advisor, Watson Career Coach (WCC), that brought the benefits of career coaching to all of IBM.

2 AI Powered Learning Portal

IBM has developed Your Learning, a rich, personalized digital marketplace for learning, visited by 98% of employees every quarter. IBMers complete an average of 60 hours of learning per year.

3 Chatter Analysis

At IBM, chatter analysis was used to surface the top three issues from social media sources within the company firewall. This provided recommendations that were personalized to a specific leader to help improve engagement in their team.

4 Using AI To Manage Flight Risk

IBM build algo to analyze employee sentiment, measured through their Social Pulse. The hypothesis here was that engagement with social media might fall when employees are thinking about leaving. The investment yielded $ 300,000,000 over four years and turnover for critical roles had fallen by 25%.

Clarks

Engagement drives financial performance

• Shoe retailer Clarks looked into the **relationship between engagement and financial performance.** The team worked with statisticians who ran the retailer's distribution planning system. In total, 450 business performance data points were included in the analysis.

• The results showed that there was indeed a connection between the two. **Engagement lead to higher business performance.** In Clarks' case, every 1% improvement in engagement, lead to an improvement of 0.4% in business performance.

• To make it more actionable, the team also **analyzed the characteristics of the 100 best performing stores**, both quantitatively and qualitatively. They found that there was an optimum team size in the store and that the length of tenure of a store manager was a significant predictor of performance.

• With these insights, the team was able to create a blueprint for high-performing stores. They also **created an engagement toolkit for improving managers' performance.**

• The UK retail **business systematically out-performed internal targets and external benchmarks**, year on year and grew market share too.

CREDIT SUISSE

An Algorithm That Tells the Boss Who Might Quit

- Credit Suisse analyzes a vast array of **data points to determine who is likely to leave a post**. People who run analytics teams give managers early warning so they can take action before employees jump ship.

- Data crunchers consider factors, which includes job tenure, geography, performance reviews, employee surveys, communication patterns and even personality tests to identify flight risks.

- The data often **reveal a complex picture of what motivates employees** to stay and what causes them to look elsewhere.

- Data scientists **create models to predict which employees might leave a company** in the near future, combining a range of variables and testing the predictions over time.
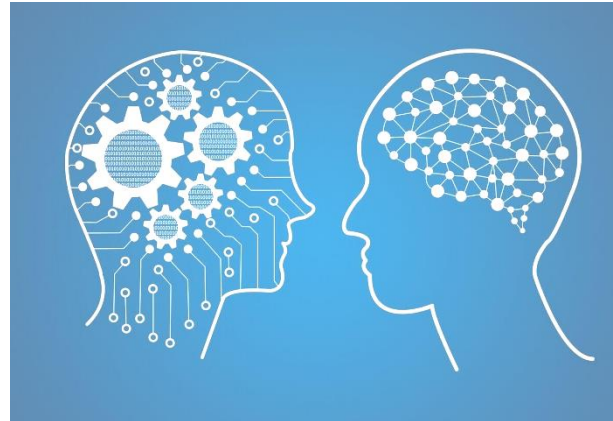
LOCKHEED MARTIN

Performance Management System

Lockheed Martin built a performance management system to link each employee's performance to organizational objectives. The automated system collects timely performance-review data throughout the year.

The data can be compared with knowledge management information, such as who has undergone formal training in specific areas. It can identify its high potentials for special programs or monitor employees who need improvement in certain areas.

Knowledge Management

nielsen

Predictive AI Model for *Employee Retention*

1 Neilsen's first predictive model included 20 variables, including age, gender, tenure, and manager rating. Over time, more variables were added.

2 This exercise provided multiple insights. First-year employees where checked whether they've had their critical contact points.

3 The first check-in with their manager had to happen within a certain time span after hiring, otherwise, it would trigger a notification.

4 This was a proven, important condition for first-year retention. Promotions and lateral moves were also a strong motivator for people to stay.

5 The outcome was that the people with the highest flight risk in the next six months were approached and the company was able to move 40% to a new role.

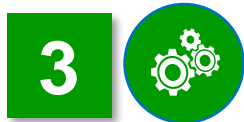**6** Making these lateral moves increased an associate's chance of staying with the company by 48%.

Sysco

Human-Capital Investment Analysis

1

Human-capital investment analysis helps an organization understand which actions have the greatest impact on business performance. One leader in this area is Sysco, the $36.8 billion Fortune 100 global food-service company.

2

The company began its workforce analysis with three gross measures for each operating unit: work climate and employee satisfaction, productivity, and retention.

3

Sysco's analysis revealed that operating units with highly satisfied employees have higher revenues, lower costs, greater employee retention, and superior customer loyalty.

4

Sysco tracks the group's satisfaction scores, and when they dip, it institutes immediate improvements to get them back on track. By retaining this key talent, Sysco saved nearly $50 million in hiring and training costs for new associates.

e·on

AI helped E.ON manage Employee Absenteeism

Absenteeism in the German 43,000 + people energy company had risen above benchmark. The analytics team formulated 55 hypotheses, tested 21 of them and validated 11. One of the examples was that selling back untaken holiday did not increase absenteeism.
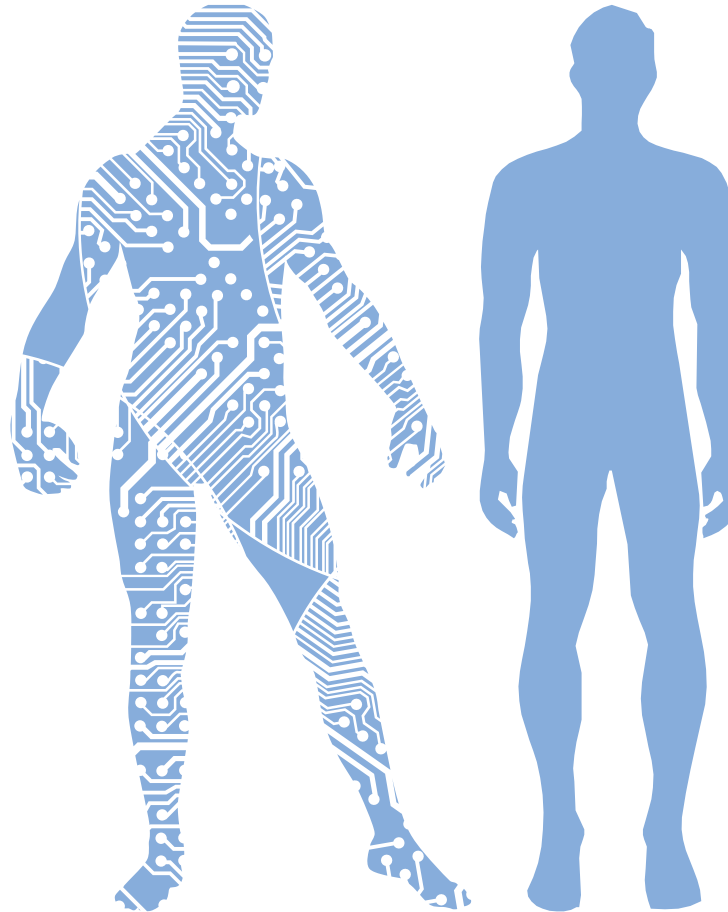
Lack of a long holiday during the year, or not taking a day or two once in a year increased absenteeism. The insight was communicated to managers to improve holiday approval policies.

BAJAJ | Allianz

**Uses an
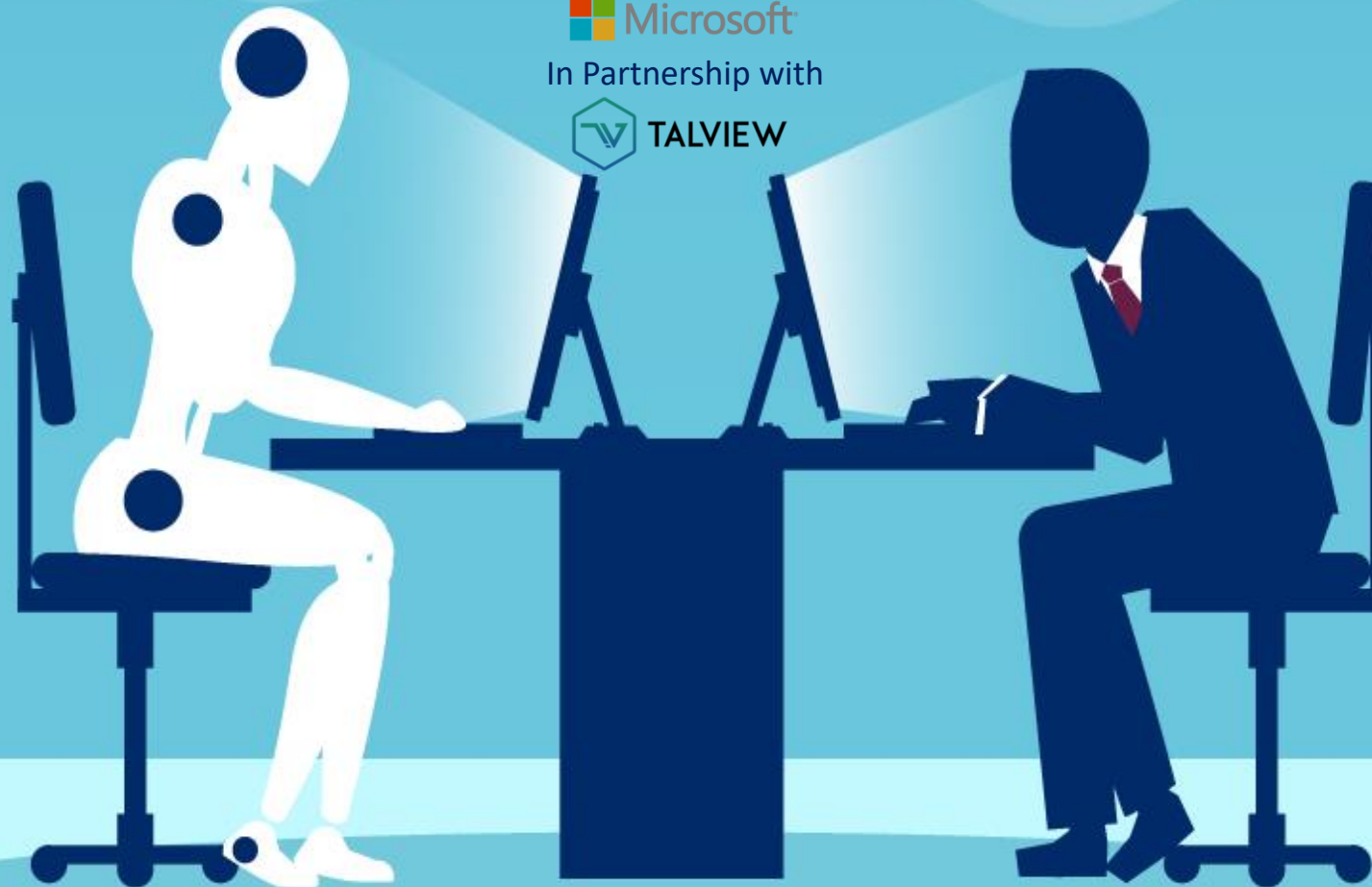Automated Video
Interviewing Solution**

Developed by

Microsoft

In Partnership with

TALVIEW

This process uses **Talview Behavioural Insights (TBI)** a job competency tool that leverages psycholinguistics to analyse candidate response to build behavioural profiles of candidates.

These profiles enable hiring managers to find the right person for a job backed by data-driven insights.
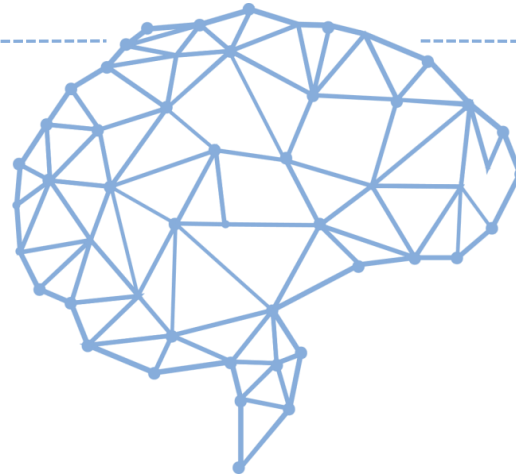
Private & Confidential

Coca-Cola

01

Coca-Cola Enterprises (CCE) began their **transformation programme** and the reporting was transitioned from North America to Europe in 2010.

02

The first step was to establish strong foundations for the **new data analytics programme.**

.

03

CCE initiated a project to reduce the volume of scheduled reports sent to customers, which enabled them to **decrease the hours per month taken to run the reports by 70%.** This was a game changer in CCE's journey.

04

Many of the remaining, basic, low value reports were then automated which allowed the team to move onwards in their journey and look more at the **effectiveness of the HR function by developing key measures.**

05

CCE begun to increase the level of insights developed through the method, and **they have started to track sentiment in the organisation.** This helped leaders with an indicator for sense-checking the power of HR initiatives and business processes.

jetBlue

Improving Employer Brand through Analytics led Employee Engagement

✓ JetBlue created an employee-satisfaction metric around its people's willingness to recommend the company as a place to work. This **"crewmember net promoter score"** has been used to study the impact of compensation changes and to help determine executive bonuses.

✓ **Employees are asked annually if they would recommend the company,** so JetBlue can effectively monitor employee engagement monthly.

✓ **JetBlue is transparent with end users about the process:** Any manager or employee may see how the data were collected, what formulas are being used, and, most important, why the data matter to the operation.

AI to predict flight risk of an employee

1 🕐

Experian built a model to predict flight risk that included 200 attributes, including team size and structure, supervisor performance, and length of commute.

2 📷

The analytics team also identified flight risk triggers: when someone moved further away from the office, this would increase immediate flight risk.

3 ⚙️

The model was rolled out in multiple regions with slight differences to the predictive algorithm.

4 📊

These insights, combined with good management practices resulted in a drop in attrition of 2-3% over 18 months with an estimated saving of $8,000,000 to $10,000,000

Workforce Forecast through AI

AI
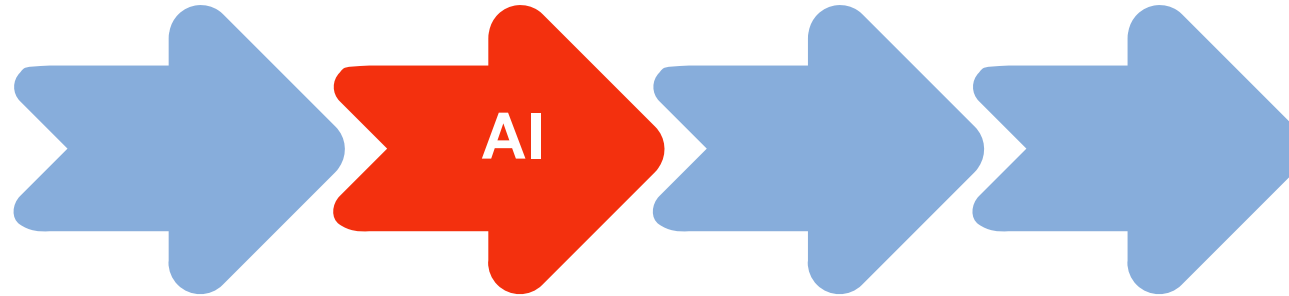
01 Dow Chemical has evolved its workforce planning over the past decade, mining historical data on its 40,000 employees to anticipate workforce needs throughout the chemical industry's volatile business cycles.

02 It forecasts promotion rates, internal transfers, and overall labour availability. Dow uses a custom modelling tool to segment the workforce into five age groups and 10 job levels and calculates future head count by segment and level for each business unit.

03 These detailed predictions are aggregated to yield a workforce projection for the entire company. Dow can engage in "what if" scenario planning, altering assumptions on internal variables such as staff promotions or external variables such as political and legal considerations.

04 Workforce forecasts can be used to staff up in key growth areas or identify knowledge management risks for retiring employees before they are clear to managers.

Tech Mahindra

Employs UVO – The Chat Bot

Tech Mahindra, uses **AI led system to find suitable candidate's profile** from a large resume database, that helps in filtering the right profile as per the job description.

01

02

UVO

03

04

Basic employee queries, which were **earlier handled by the HR team, are now tackled by a chatbot called UVO**, which also assists employees in applying and getting leave approvals, handles requests for cash advance, travel and so on.

UVO also helps in automating employee ID creation, data administration and in other areas as well, like job matching, predicting employee learning and wellness..

Using AI, they are able to **increase employee satisfaction** and also **reduce attrition** in the HR team as the monotonous work has been reduced to a large extent.

Deciding New office locations by AI powered talent Analysis

Cisco has used demographic data to identify where they can best open up new offices. By combining various data, including current usage rates of office space, cost and availability of key talent, and availability of graduates from universities allowed them to expand in areas where there were fewer larger players competing for the same talent.
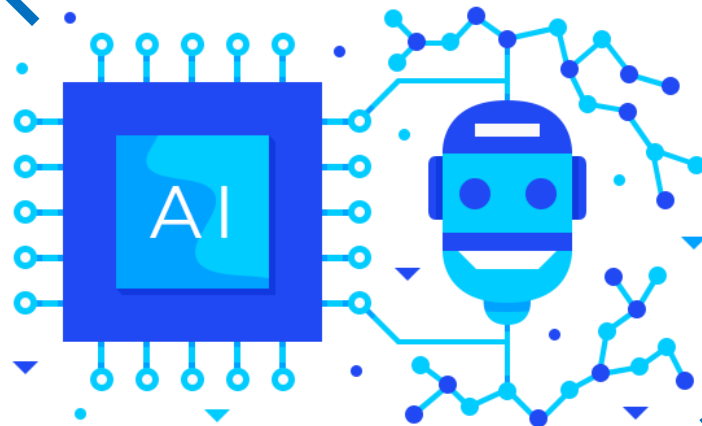
In addition, while selecting a new office, Cisco made use of this same data to find locations where employees with relevant qualifications were available and abundant. External data has played a big role in this case.

AI plays a very important role in its selection process

- Mindtree has been using AI applications extensively in all its verticals, especially HR.

- Mindtree has been using AI not just for processing large data, but also about **finding correct resumes,** eliminating bias and discovering fraudulent resumes.

- **AI has dramatically changed the way they do things**, from the selection process and screening of resumes to answering employee questions in real time.

Artificial Intelligence & Machine Learning
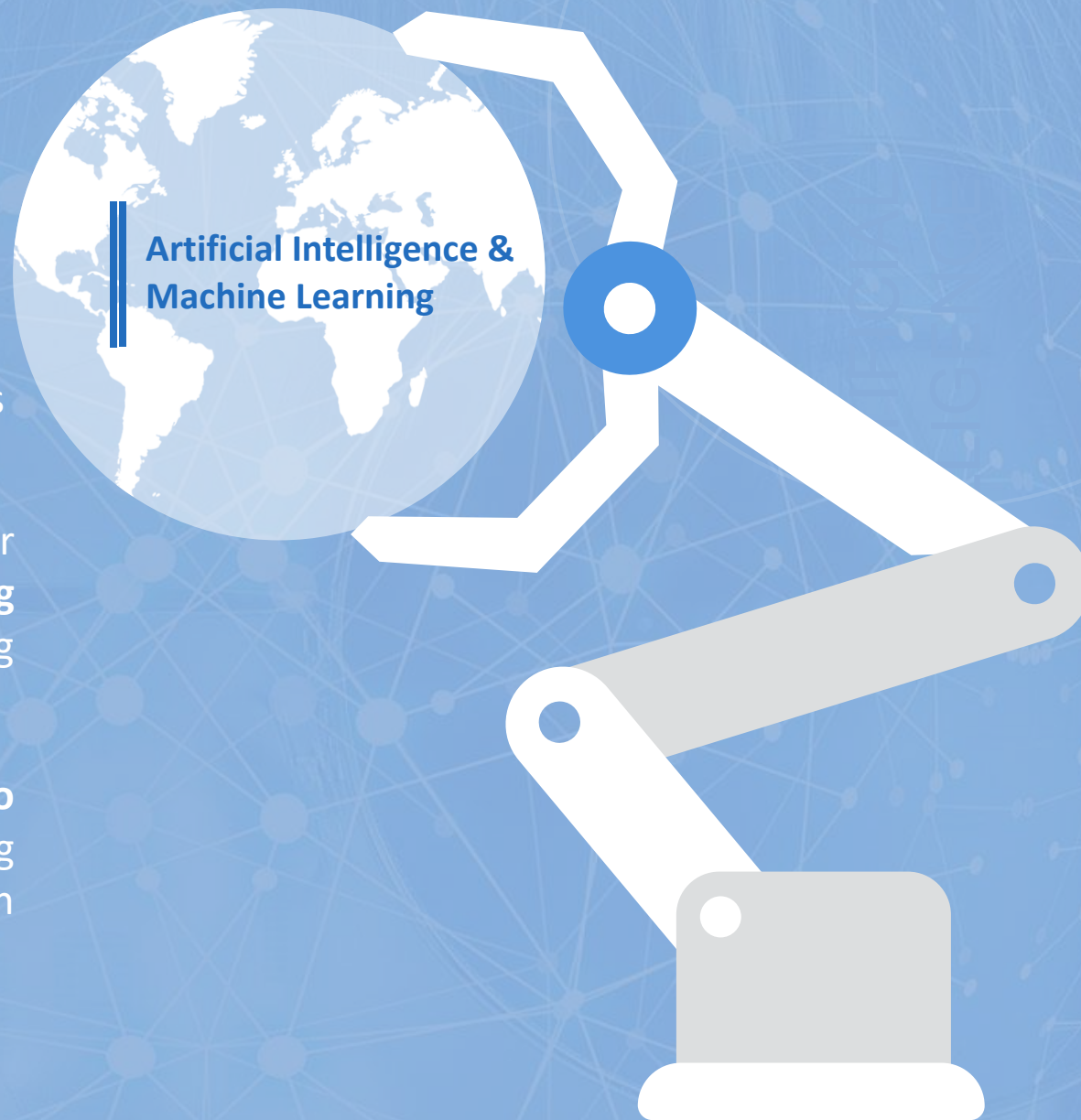
INTRACORP

HR Analytics at a *small* Company

1 Intracorp, a real estate developer, had less than a hundred employees. The disperse teams were siloed causing communication problems that led to mistakes, misunderstandings, and missed deadlines.

2 Using this measurement system, productivity improved by 10%. In addition, 60-minute live, virtual content sessions once a week lead to an increase of information sharing and an increase of retention by 128%.

3 Intracorp wanted to train their teams and leaders within the flow of their workday. They did this by selecting the highest priority development areas. This enabled them to measure a decreased cost of lost productivity.

4 After the session: people would talk about it, share their learnings. 1-1 leadership coaching was even more effective in increasing retention, and meeting inefficiencies were reduced by 50% within 30 days.
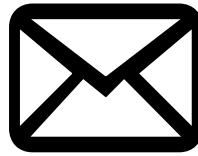
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