

AI in the Human Resources Industry

A bitgrit industry case study

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INTRODUCTION

For quite some time, companies have utilized artificial intelligence (AI) to reshape the various workflows and processes in the realm of Human Resources. This is evidenced by global survey results, which suggest that early AI adopters have seen a noticeable improvement in KPI achievement made possible by adopting AI.

The purpose of this document is to explore the most general processes followed by the Human Resources industry and propose AI integration into these processes. In implementing this technology, companies can focus their time on more strategic tasks that require the utmost human attention.

To highlight the need for such technology, we have considered the following verticals of the HR industry as effective areas for AI use cases:

- Employee Recruitment
- Employee Retention
- Employee Satisfaction
- Payroll Management
- Appraisals and Bonuses

GENERAL CORPORATE USE CASES

AI can be used to accelerate business automation, which speeds up processes and increases efficiency. Business automation use cases particularly effective for the HR industry include the following:

- Automating the recruiting process to find the right people for the right job
- Maintaining a safe workplace environment
- Employer-employee relations
- Automating compensation and benefit calculations

- Computing labor law compliance
- Automating training and development processes

The above are more representative examples. In the next section, we dive into specific use cases.

SPECIFIC USE CASES OF AI & RPA IN THE HUMAN RESOURCES INDUSTRY

Here, we dive into more detail about just how AI can be of help to the realm of Human Resources. The key areas where the Human Resources industry can leverage AI technologies are as follows.

1. Employee Recruitment

AI helps in reducing cost-per-hire without adversely affecting the time required per hire – by extension, making the HR process more efficient. Below is a breakdown of how AI assists in each step of the recruitment process:

Sourcing of talent

With the help of NLP and automation, recruiters can extract candidate profiles available on professional networking websites and reach out to relevant candidates with greater specificity. AI can also help build “hiring funnels” to analyze why certain conversion rates are more effective than others.

Advertising

Trained AI models give insights into human resource requirements and assist the company in better allocation of funds for recruitment. Using NLP, stakeholders can determine the attractiveness of different advertisements with greater certainty.

Application collection and screening

- Custom-trained AI models can use each application submission to construct a dataset of key attributes. Recruiters can feed datasets with the requirements in mind, either by automated extraction of attributes from the job description or by manual filling of those attributes.
- AI-based platforms can assess culture fit, which ensures long-term employment.

Speed up shortlisting

AI can help recruiters save valuable time by pre-screening the best candidates for a given position. These may also be used to double-check screened applications to see if they meet certain requirements. A robust chatbot can feed on relevant information from individual applications and can design follow-up questions based on their skills and qualifications.

2. Employee Retention

According to popular surveys, voluntary attrition on average costs 20% of the annual salary of that employee to the company, and this figure excludes onboarding and training costs to match the productivity of the previous employee. Using advanced analytics, AI and machine learning, companies can analyze if an employee is likely to quit based on available data points (e.g. work patterns, performance, compensation, delays in promotion/progression). This helps HR and management motivate and retain employees.

Below are other ways in which AI can lead to higher retention rates:

Improving work-life balance

AI-based task scheduling can help mediate the risks of inconvenient work hours while aligning workloads to individual employee preferences without affecting productivity.

Career progression planning

AI engines can monitor stagnation to guide managers towards learning & development programs to suggest new areas of growth.

3. Employee Satisfaction

Employee satisfaction is crucial to limiting turnover and attrition, but is not necessarily an indicator of high performance or engagement. An employee satisfaction strategy manages the basic needs and concerns of the employees and is a building block for employee engagement.

Sentiment Analysis Tool

AI can be used to identify instances of dissatisfaction among the workforce through sentiment analysis tools. With AI, companies can understand how an employee is feeling about developments in the workplace.

AI-driven feedback technologies

By leveraging the power of AI and natural language processing (NLP), employers can easily decipher hundreds of employee comments to reveal their key concerns and apprehensions about their work and the workplace. Based on these insights, employers can craft a comprehensive employee satisfaction strategy to address the pain points.

4. Payroll Management

AI payroll solutions significantly reduce the likelihood and severity of human error while improving compliance performance.

Tally wages and man-hours

AI tools can get rid of clock-in and out errors and misreporting by recording work entries automatically.

Error correction & prevention

AI can significantly reduce human errors while improving compliance performance by managing procedural data and automatically applying compliance regulations. AI tools can also flag systematic issues by monitoring how data is collected and processed and offer strategies to improve efficiency.

Automated query management

- Chatbots can address many routine payroll queries from employees that take up considerable amounts of time

and resources. This way, chatbots give employees the quick responses they need and free up payroll staff to focus on the company's bigger tasks.

5. Appraisals and Bonuses

AI can be used in a performance management process in providing timely feedback, which allows employers to recognize talent and growth opportunities early, thereby allowing for efficient management, overall lower costs, and dual success for employees and the organization.

AI-based predictive appraisals

- AI analyzes data to predict future performance levels, allowing managers to compensate employees for what they are going to achieve instead of what they've already done.

Managers can conduct bias-free performance reviews

- AI leaves less room for favoritism or personal likes/dislikes. By providing objective performance feedback, AI helps managers optimize the appraisal process while also instilling trust in team members.

6. Automation of Administrative Tasks

Automating low-output, easily repeatable administrative tasks gives HR professionals more time to contribute to strategic planning at the organizational level.

- AI technologies can automate processes such as administration of benefits, pre-screening candidates, scheduling interviews, and more.
- RPA can automate much grunt work using software robots - often involving recording and mimicking a user's keystrokes, which eliminates hours of repetitive, stress-inducing work.
- In their own roles, business executives see huge potential for AI to alleviate repetitive tasks such as:



Image taken from PWC [Consumer Intelligence Series](#)

7. Understanding Employee Referrals

AI also enables HR teams to better understand employee referrals by looking into the kinds of candidates employees are referring and gaining insight on the most successful candidates.

- Analyze performance data: Previous referrals can be analyzed for performance, which helps recognize when candidates similar to successful employees are being recommended.
- Eligibility of referrals: Based on performance of referrals, employees may be eligible for further referrals, with all of this being managed by a centralized, AI-based system.



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bitgrit: AI for All

The AI industry is projected to grow to **\$116 billion** by 2025.

bitgrit is a company providing a platform that levels the playing field for AI by bringing together a community of data scientists and connecting them to companies needing AI solutions.



AI COMPETITION

Affordable and novel AI solutions to complex business challenges



JOB BOARD

Access to top data scientists and AI engineers around the world



DATA VISUALIZATION

Big Data and Analytics utilization that identifies market trends and increases the productivity



AI CONSULTING

AI technology adoption with conducting research and analysis, development and implementation

COMPETITION STEPS

STEP 1

Determine what problem you want solved and provide the relevant datasets

STEP 2

bitgrit uploads the problem statement and datasets to the competition platform

STEP 3

Data Scientists in the community submit quality solutions from which top results are selected

STEP 4

Utilize the best model to fulfill your business needs

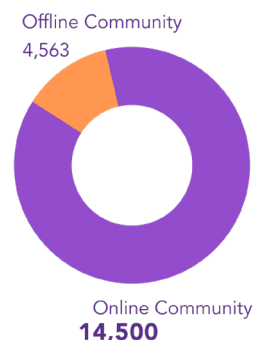
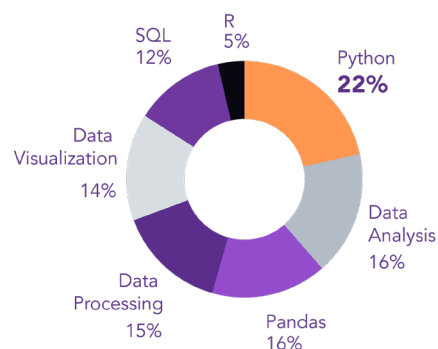
STEP 5

Top ranking competition member or team wins prize money

UNREALISED POWER OF AI

- 1 Determining possible use cases and value that can be extracted from existing data.
- 2 Difficulties in translating business challenges into data science problems.
- 3 Inability to develop, experiment and rank a variety of models rapidly.
- 4 Risks of providing people the access to confidential data.
- 5 Hassles of identifying the right talent to produce customized, extraordinary models.
- 6 Structuring of data and identification of relevant parameters.

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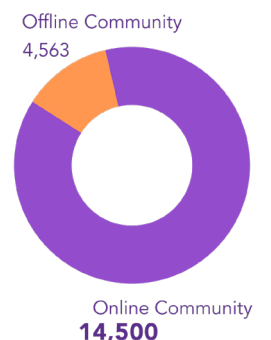
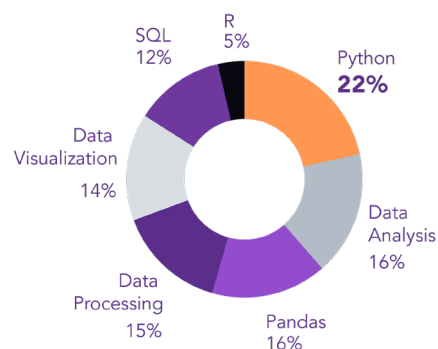
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HOW WE HELP YOU TAP INTO AI

- 1 Determine possible use cases and value that can be extracted from existing data.
- 2 Pinpoint difficulties in translating business challenges into data science problems.
- 3 Overcome obstacles to develop, experiment and rank a variety of models rapidly.
- 4 Identify risks of providing people the access to confidential data.
- 5 Find the right talent to produce customized, extraordinary models.
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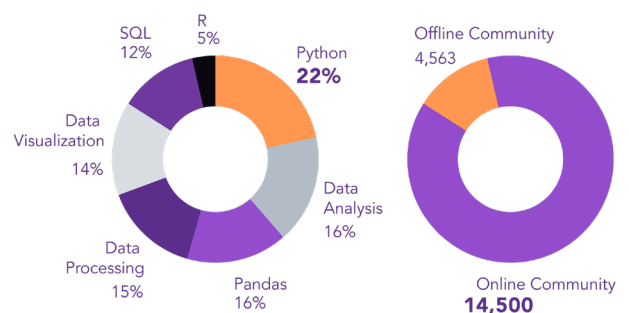
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