APPLICATION OF AI

Application in AUDIT :-GRAPA: assistance with risk strategies

Problem :- When auditors determine a risk strategy, they partly base it on knowledge that they gained during previous audits. Company is now developing a smart personal assistant that supports auditors using the pooled expertise of all their fellow professionals.

Solution:- Determining the risk strategy forms an important part of an audit. Twan van Gool, Director Innovation & Analytics within the Audit department at Company, explains: “The auditor determines which sections of the annual accounts are high-risk, based on market developments, new legislation and regulations or events within the company, for example. The chosen risk strategy determines the subsequent audit method.” When formulating the risk strategy, an auditor’s knowledge gained from previous cases will be very valuable. “Every business is different, of course, but an audit is an audit,” notes van Gool. “While lingerie and cycling might have nothing in common, the retail and stock process of Hunkemöller is largely the same as that of Halfords. So the associated risks are also similar to one another.” A second reader Imagine how useful it would be if auditors could use not only their own knowledge and experience, but also those of fellow auditors, when determining the risk strategy. With that idea in mind, Van Gool’s team developed the AI tool Guided Risk Assessment Personal Assistant, or GRAPA for short. “GRAPA assists an auditor in marking out their chosen strategy against all other risk strategies that have been used before,” explains van Gool. It uses a Company database of 10,000 cases, and each case contains an average of fifty risks. GRAPA is not a stand-alone application; rather, it is added to the software that auditors use when determining the risk strategy. “It’s as if you can ask a second person to read alongside you,” Van Gool continues. “But the advantage is that this second reader has the pooled expertise of Company.” He emphasises that the auditor remains responsible for the chosen risk strategy and audit method. “GRAPA indicates what has happened in similar cases. But if there is anything about the client’s situation that is special or unusual, it is obviously down to the auditor to tailor the approach accordingly.” Benchmarking and planning The tool is therefore not intended to replace auditors. “When it comes to critical consideration of processes, developments and risks, you still need creativity and human intelligence,” maintains Van Gool. However, he does recognise there are opportunities to automate the completion of an audit once the risk strategy and audit method have been determined: “Those activities are so standardised that a robot could do them.” Company intends to use GRAPA in 2019 for the audit of the 2018 tax year. “We are currently working on a proof of concept,” says Van Gool. The next step is to use GRAPA for more than just examining data from the past. “We want to feed the tool with market development data, such as those relating to Brexit, or high-risk derivatives in the housing market. That knowledge will enable the tool to also present potential future risks to the accountant.” AUDIT “When it comes to critical consideration of processes, developments and risks, you still need creativity and human intelligence”

Advantages: Specifically, internal audits may identify issues impacting:

* Accurate processing
* Policies and procedures in place
* Safeguards against fraud risks
* Operational risks and information systems controls

Application in AUDIT :- Argus: an eye for detail

Problem :- The Engagement Team at Company doesn’t need to be told how massively labour-intensive it is to scan through lengthy contracts in order to identify minor differences. Fortunately, they will soon receive a helping hand in the form of Argus, an artificial intelligence solution that compares documents quickly and picks out the tiniest details and discrepancies. 21 16 Artificial Intelligence projects from Company | Practical cases of applied AI Minor amendments “Our department assesses an awful lot of documents”, says Twan van Gool, Director Innovation & Analytics within the Audit department at Company. “Take referral instructions, for example: internal agreements requiring a number of confirmations from Company auditors in other countries.”

Solution:- It is often the case that one of these instructions is returned with a minor amendment. “The original states that the audit is to be carried out in English, but in the returned version, it has suddenly changed to Russian or Portuguese,” Van Gool continues. “By doing this, a team is trying to fulfil specific wishes while keeping an eye on their own budget.” It is a burdensome and time-consuming task to spot these kinds of minor amendments. “I have seen people placing one page on top of the other and holding it against the light in an attempt to quickly identify whether anything has changed. That’s obviously not the most effective way of going about it,” remarks Van Gool. He is therefore looking forward to the introduction of Argus, a smart tool that scans and analyses documents using cognitive technologies. “First of all, you teach Argus the structure of a contract, and what the components are that are permitted to vary from contract to contract, such as the name, place, and date. Argus is then able to make comparisons and search for differences,” he explains. Argus analyses the differences, assigns the amendments to categories according to how significant they are, and delivers a risk report. AUDIT Departments that are already using it have noticed that reviews of contracts are being carried out far more efficiently and with a higher level of quality Global application For the time being, Argus is only being used within the Audit departments of Company US, Canada and Australia. Company Global is currently in negotiations regarding the licence for global use. “We hope to be able to start using Argus this year. We have to wait a little while, but we will soon receive a tested concept,” states Van Gool. The results of using Argus are plain to see. Departments that are already using it have noticed that reviews of contracts are being carried out far more efficiently and with a higher level of quality. At first, the tool is expected to be used mainly for analysing differences between contracts. “But there are unprecedented opportunities for providing support in the analysis, appraisal and comparison of documents,” notes Van Gool. “And we are rapidly developing algorithms for analysing other types of documents, such as invoices.” For example, he believes that Argus will bring about an end to manually searching for details in labour-intensive, data-orientated audit tasks, “such as manually re-entering the total amount from a scanned invoice. Very soon, Argus will do that for you.” The Argus licences are valid specifically for Audit, but Van Gool also recognises opportunities to use it in other Company departments. “Argus could make a major difference in Consulting or Tax. In fact, anywhere where more than a handful of contracts need to be compared, or information needs to be copied across from documents.”

Advantages:

1.Compliance

Obviously this is one of the main reasons to conduct an audit: to meet the statutory requirements and regulations in your industry. An audit provides complete peace of mind for business owners and shareholders that the organisation is 100% compliant with all of its current statutory obligations. Non-compliance runs the risk of incurring heavy fines, loss of customers and a tarnished reputation – damage that far outweighs the cost and any minimal, temporary inconvenience that may be caused by an audit.

2. Business Improvements / System Improvements

A thorough, in-depth audit takes an impartial look at your organisation’s internal systems and controls. This means it’s an ideal opportunity for the auditing experts to suggest improvements that can make your business more efficient. Ways to improve internal controls, business systems, accounting practises, efficiencies, governance and culture can all be identified through the audit process.

3. Credibility

An audit provides independent verification that the financial statements are a true and fair representation of the entity’s current situation. This provides invaluable credibility and confidence to your organisation’s customers/clients, stakeholders, investors or lenders and even potential buyers. It is confirmation that financially everything is as it appears to be.

4. Detect and Prevent Fraud

It’s estimated that up to 30% of New Zealand businesses are subject to fraud, error and corruption. Workplace fraud can occur for years without being detected and can be so substantial that some businesses never recover financially or repair their reputations. An audit can be an effective tool for identifying fraud and opportunities to commit fraud. Experienced auditors are skilled at pinpointing weaknesses in an organisation’s systems and controls and suggesting ways to strengthen these to prevent fraud occurring.

5. Better Planning and Budgeting

An audit confirms the accuracy of an organisation’s financial statements by analysing its financial transactions. It’s a detailed process and can result in certain types of income, expenditure, assets and liabilities being scrutinised. This critical examination, coupled with the auditor’s financial expertise, can then be used by business owners for better financial planning, budgeting and financial decision-making for the future.

Application in CONSULTING :-HR agent Edgy: the future of Human Resources

It sounds futuristic: a robot that eases the workload of the Human Resources department by resolving employee queries and supporting recruiters at events. Yet a team at Company has shown that it is possible. Its smart robot, named Edgy, has demonstrated a number of areas of application for robotics-based automation within HR. 16 Artificial Intelligence projects from Company | Practical cases of applied AI Doing and thinking There are numerous processes within HR that lend themselves especially well to roboticsbased solutions, says Henri Drogulski, Human Capital business analyst at Company. He describes them as “processes with a high volume of identical transactions and few exceptions,” such as checking the documents submitted in a job application, and subsequently forwarding them to the correct department. “Those types of repetitive tasks performed according to fixed rules are easy to automate using RPA, or Robotic Processing Automation,” says Drogulski. Rob van Werven, senior consultant in Strategy & Operations at Company, agrees: “HR is also the ideal field for cognitive robotics solutions, in which a robot makes its own assessments and initiates interactions.” For example, a software robot can analyse a CV and determine whether the applicant is open and sociable, or is more of an introvert. “These technologies have matured in 2018, and are accessible enough for our clients to also benefit from them within HR,” adds Drogulski. A cross-functional Company team, with members from Human Capital, Strategy & Operations, and Technology, began working on combining RPA and cognitive technologies into a single robot. “We wanted to produce a robot that demonstrates state-of-the-art technologies, while at the same being fun and appealing,” says Van Werven. More than a gadget The end result of their efforts was Edgy, a cognitive chatbot within a humanoid robot. Edgy has speakers, cameras and microphones, and is able to interact with employees and potential candidates. It recognises faces, and welcomes people it has met previously by name. It also answers all manner of questions using a wide variety of cognitive cloud services, such as speech recognition, computer vision and natural language processing from Google and IBM Watson. “And to add the personal touch, Edgy can make jokes and cool gestures, like the dab,” says Van Werven. “A walking, talking robot can easily be regarded as a gimmick,” adds Drogulski. “That is why we are only using Edgy to explain the application of robotics in HR.” Edgy is therefore used to record employees’ sickness and recovery reports, or to assist them with entering expenses claims. Edgy can also tell you everything about working at Company. “It can even match candidates to an existing vacancy during an interview,” asserts Drogulski. Inspiring From this spring, Company has been using Edgy for robotics demonstrations and inspiration sessions. “We want to encourage our clients to think about how they could use robotics,” says Drogulski. An initial demonstration of Edgy is followed by a deep dive session on the subject. “We look at which of the client’s HR processes could be suitable for a robotics solution.” Drogulski does not expect that the HR department will be operated entirely by robots in the future, though: “What we actually want to do is to free up employees to do the tasks that can only be done by humans.” Recent research by Company confirms this idea: directors reported that they intended to use software robotics primarily to make sustained improvements to quality and service-orientation, rather than to make cuts to staff. CONSULTING 25 And to add the personal touch, Edgy can make jokes and cool gestures, like the dab.

Advantages: For small businesses, there are numerous advantages to hiring an outside consultant, the most important of which include having a positive impact on the company's bottom line. Human resources consulting services can be engaged on an hourly basis or hired on a contract basis to fill interim HR management positions. Either arrangement benefits your company based simply on the level of expertise the consultant brings to your organization. The benefits of an HR consultant are both tangible and intangible; however, the bottom line reflects the tangible advantages to engaging the services of an HR consultant.

Application in TAX & LEGAL:- SONAR: find labelling errors in databases

“SONAR allows you to check the information entered by humans far more quickly and accurately”  
  
Problem:- Just under a year ago, a company was approached by a major retailer. Its range consisted of over 30,000 products, and the commodity codes provided by suppliers had to be checked manually for around 600 new products every month. In addition, information had to be entered relating to the VAT rate and any local levies, such as the battery tax that applies in Belgium for products containing batteries. It was not unusual for something to go wrong when it came to this labelling. The retailer asked company for assistance in checking the information entered by human staff members.

Solution:- It works like this: a client supplies a data file containing as many details as possible – the commercial product description, the VAT rate, the commodity code and an indication of whether or not each local levy applies. But it also contains, for example, the barcode and other information that can assist with understanding the nature of the product. SONAR compares this information against a customs database containing all commodity codes, a textual description for each commodity code, and the applicable rate of VAT. The comparison results in a percentage to indicate the likelihood that the label added by the client is correct. If a label is more than 80 percent likely to be incorrect, for example, the product can be checked by a person. A great deal of label-related work is simple, but new, innovative products often require additional attention. “Legislation often fails to keep up with reality,” remarks Smit. “Take smartphones. Should we classify them as a phone, or as a navigation system, for example?” Such cases need to be assessed by an expert. SONAR allows the checking of the vast majority of products to be automated, so that additional attention can be paid to the difficult cases.

The SONAR team went to a shop together with the client to test the tool, and carried out a random check on a shelf of bicycle lights. In the case of one bicycle light, SONAR indicated that something was likely to be incorrect regarding the battery tax. “Upon closer inspection, it turned out that there was indeed a small battery included in the packaging, although that wasn’t included in the description,” recalls Smit. “We thought it was highly amusing: something we had built within a week had an immediate impact.” SONAR was developed for a client, but Smit believes the technology is generic enough to be implemented for other problems. It works particularly well with databases containing at least 2,500 products, and a reference database must be available. “SONAR allows you to check the information entered by humans far more quickly and accurately,” asserts Smit. “And the best part about it is, the more often you use the technology and the more product information that becomes available, the more accurate the results will be.”

Application in TAX & LEGAL :-Transaction detector with regard to the Dutch work cost regulations

Problem :- The work-related expenses scheme in the Netherlands, known as WKR, causes a world of problems for many companies. A company has developed a clever solution to assist its clients in implementing this tax scheme correctly.The WKR permits companies to spend 1.2 percent of taxable wages on tax-free allowances and benefits in kind for their employees. “When the scheme became compulsory for all employers back in 2015, it soon revealed a number of problems,” explains Guy Thien, tax consultant at company. “In practice, for example, there is a major lack of clarity regarding who is responsible for implementing the scheme. It requires data from HR, salary and financial records, to name a few, but no one takes the role of managing it.” What is more, it is still a fairly unfamiliar scheme, and consequently many expenses are incorrectly excluded from it. “If a director gives ten employees an iPad each, he is often unaware that this has implications under the WKR,” continues Thien.

Solution:- “He fails to inform the appropriate parties, and the expense falls through the cracks.” Categorising and learning In order to overcome these problems, Company’s Financial HR Analytics team developed an intelligent system that reads descriptions of expenses and is able to categorise them: WKR Analytics. “You enter all your expenses, and the system then picks out what is covered by the WKR. Without our tool, a client might achieve a quality level of 20 percent in its implementation of WKR. We increase it to 95 percent,” asserts Thien. A tax expert is called in for the remaining 5 percent. The expert wastes far less time on WKR than was previously the case, and is able to focus his attention on the doubtful cases. “If WKR Analytics categorises an expense incorrectly, you can correct it and the system will learn from it,” explains Thien. “Every correction makes the system smarter and more efficient. The longer you use it, the less time you waste on it.” WKR Analytics comprises a combination of machine learning technologies and natural language processing – in other words, knowledge of language and use of words. “The WKR is relevant in specific situations,” continues Thien. “Take going for lunch. When I go and have lunch with a colleague, that may have different implications under the WKR to “Once you have gained an advantage with AI, you don’t lose it very quickly” when I go for lunch with a client. WKR Analytics understands that distinction.” The advantage WKR Analytics is now being used by over forty clients. “I have noticed that the time is ripe for smart solutions,” says Thien. “Back in 2014, when I told employers about WKR Analytics, they scarcely believed that it would really work. Now, they are actually curious as to what we can offer.” Not only is the number of users growing, WKR Analytics is continuing to develop too. “We are continuing to improve the dashboard, as well as adding new information and constantly increasing the degree of integration with VAT analytics,” says Thien. “We are now also demonstrating what the level of data quality is. In just two hours, we can know whether a company’s data are good enough to enable WKR Analytics to be used.” The success of WKR Analytics has not gone unnoticed. There are even a few companies that have attempted to copy it. Thien considers it a compliment: “That doesn’t scare me. Once you have gained an advantage with AI, you don’t lose it very quickly.”