CENTRAL BANK OF EGYPT
Egyptian Banking Institute

Chat GPT

ChatGPT and the Future of Work "Banking Industry Use Cases"

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EBI Study 2023

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Abstract

Generative AI such as ChatGPT is radically changing the world of work and is reinventing the way work is done; introducing a new dimension of human and AI collaboration. Jobs will be impacted – whether to be omitted or transformed and new jobs will be created. The effects of ChatGPT will vary by occupation, task, and skill level. As per the world of economic forum future of jobs report 2023, 40% of all working hours could be impacted by large language models (LLMs) such as ChatGPT, 65% of the time spent on "language tasks" can be transformed into more productive activity through augmentation and automation. The study aims to explore the changes in jobs and functions caused by the usage of generative AI like ChatGPT, with a specific focus on the potential use cases in the banking industry, human resources and L&D areas. The study is also highlighting the limitations and drawbacks of ChatGPT application in business and share some recommended actions for professionals to apply the model inside their organizations. The study finds that Chatgpt application is still in an early stage of maturity, thus professionals have to well consider the use cases implications prudently to determine the appropriate level of human oversight. The right balance between technology and humans is the optimum solution. The potential of ChatGPT use cases in banks and HR and L&D areas is promising and can enhance productivity and efficiency. However, executives should work hard to identify the parts of their business that will be mostly affected by the new technology, while monitoring cybersecurity and regulatory compliance and other drawbacks. Business leaders and HR professionals should reinvent work and lead the cultural change and proceed with jobs and tasks redesign, while reskilling people to work differently and to keep up with technology driven advancement.

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Introduction

Generative artificial intelligence (GenAI) and other foundation models are changing the AI game, taking assistive technology to a new level, reducing application development time, and bringing powerful capabilities to business and public users.

Recent breakthroughs in the field, such as **GPT** (Generative Pre-trained Transformer), have significantly advanced the capabilities of **GenAI**. Since its recent release in 2022, this advancement has opened up new possibilities for using **GenAI** to solve language tasks, complex problems, create art, and even assist in scientific research. The adoption of large language models (LLMs) such as ChatGPT is considered as a significant turning point in Artificial Intelligence.

ChatGPT is an AI-based tool that processes natural language and provides answers in human-like written interactions. This large language model (LLM) can do various things, including: Answering questions, summarizing information, analyzing data, translating and other features.

ChatGPT has captured a global attention and spark a wave of creativity and vast transformation in AI area. As per Accenture, ChatGPT reached 100 million monthly active users just two months after launch, making it the fastest-growing consumer application in history. 98% of global executives agree AI foundation models will play an important role in their organizations' strategies in the next 3 to 5 years[1].

ChatGPT can streamline business workflows, improve the day-to-day efficiency of knowledge workers, automate routine tasks and give rise to a new generation of business applications by putting new kinds of hyper-personalized intelligence into human hands. By handling routine tasks, ChatGPT offers the opportunity for professionals to focus on complex, creative, and rewarding aspects of their work. Thus, it can augment human capabilities and engage workers more in critical thinking, problem-solving, and innovation.

User friendly generative AI applications like ChatGPT are rapidly democratizing the technology in business and society. The potential effect on business and workplace will be profound.

The ability of LLMs to process massive data sets allow them to potentially impact the business different aspects including its products, markets and customers. Anything conveyed through language (applications, systems, documents, emails, chats, video and

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[1] A new era of generative AI for everyone - The technology underpinning ChatGPT will transform work and reinvent business, *Accenture, 2023*, https://www.accenture.com/content/dam/accenture/final/accenturecom/document/Accenture-A-New-Era-of-Generative-AI-for-Everyone.pdf

audio recordings) can be connected to drive next-level innovation, optimization and reinvention.

Innovation in generative artificial intelligence have the potential to bring extensive changes to the global economy. They could drive a 7% (or almost $7 trillion) increase in global GDP and lift productivity growth by 1.5 percentage points over a 10-year period according to Goldman Sachs[2].

As for the impact of the expanded expected usage of tools such as ChatGPT on the workplace, it is worth noted that jobs displaced by automation have historically been offset by the creation of new roles, and the emergence of new jobs following technological innovations accounts for a long-term employment growth.

Despite the expected powerful capabilities, concerns about ChatGPT potential misuse and other drawbacks are also raised.

The study aims to explore the changes in jobs and functions caused by the usage of generative AI like ChatGPT in business, with a specific focus on the potential use cases in the banking industry, human resources and L&D areas. The study will try to identify to which degree existing jobs and tasks will be disrupted. In addition to highlight the limitations and drawbacks of ChatGPT application in business, and share some recommended actions for professionals to apply the model inside their organizations.

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[2] *Generative AI could raise global GDP by 7%.* Goldman Sachs, 5 April 2023,
https://www.goldmansachs.com/intelligence/pages/generative-ai-could-raise-global-gdp-by-7-percent.html

Part One
ChatGPT and the World of Work

1- **ChatGPT impact on the future of jobs:**

Generative AI such as ChatGPT is radically changing the world of work and is reinventing the way work is done; introducing a new dimension of human and AI collaboration. Jobs will be impacted – whether to be omitted or transformed and new jobs will be created.

The effects of ChatGPT will vary by occupation, task and skill level.

For the text based and writing jobs, professionals in the fields of marketing, legal services, journalism, finance, insurance services and education are already seeing some job automation as a result of generative AI. Within these industries, jobs that require less human interaction or critical thinking are most at risk.

For example, MIT study[3] assume the following, a generative writing tool like ChatGPT might entirely replace certain kinds of writers, such as grant writers or marketers, by letting companies directly automate the creation of grant applications and press releases with minimal human oversight. This might not increase the quality of the resulting written output, but would let companies save on wage costs by eliminating human labor. Alternatively, a tool like ChatGPT could substantially raise the productivity of grant writers and marketers, for example by automating relatively routine, time-consuming subcomponents of their writing tasks, such as translating ideas into an initial rough draft. In this case, demand for these services could expand, resulting in higher employment and wages as well as greater productivity for companies and cheaper products for consumers.

As for jobs with high level of human interaction, HR professionals, customer service and other workers that manage human relation and behavior will also see some job losses or changes. For HR professionals, chatbots can help answering questions from prospective employees and new hires, streamlining recruitment, onboarding, performance management and compliance. On the other hand, generative AI threatens clerical and non-customer-facing roles.

AI tools are already having an impact on **tech and quantitative jobs** while influencing the way computer coders, software designers and accountants work. Additionally, the expertise in AI is highly considered in the market. New roles will also rise, including linguistics experts, AI quality controllers, AI editors, and prompt engineers. Business leaders found that **91% want to hire workers with experience using ChatGPT**, **and 29%**

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[3] Noy Shakked and Whiteny Zhang, Experimental Evidence on the Productivity Effects of Generative Artificial Intelligence Working Paper, MIT, 2 March 2023

said they will hire engineers who can develop and train chatbots to meet company needs[4].

An example of the future of tech jobs is about "Prompt Engineers". ChatGPT responses and outputs should take effort and experimentation, through what is called "prompt engineering", to formulate questions that will yield the desired response. Multiple organizations are recognizing this as a valuable skill, as evidenced in job postings for "ChatGPT Specialists" and "Prompt Engineers"[5]. This job responsibility may include designing AI prompts, testing and evaluating the performance of AI prompts, and troubleshooting technical issues related to AI prompts. However, the future of tech jobs is not clear enough, some experts predicted that "prompt engineering" is not going to be a high-demand job in the long-term. That is because, AI is getting easier to use and can create more precise results over time as each new version is released and more people use it.

The World Economic Forum's Future of Jobs Report 2023 says that AI and machine learning specialists, data analysts and scientists, and digital transformation specialists are the most prominent emerging roles. It predicts a **40% jump in the number of AI and machine learning specialists by 2027, a 30-35% rise in demand for roles such as data analysts and scientists or big data specialists, and a 31% increase in demand for information security analysts. This would add a combined 2.6 million jobs.** On the flipside, some jobs are seen as likely to decline quickly because of AI. These are mostly clerical or secretarial roles, and include bank tellers and data entry clerks. For more details about the growing and declining jobs please refer to table (1).

Table (1) Fastest growing vs. fastest declining jobs

Top 10 Fastest growing jobs	Top 10 Fastest declining jobs
AI and Machine Learning Specialists	Bank Tellers and Related Clerks
Sustainability Specialists	Postal Services Clerks
Business Intelligence Analysis	Cashiers and Ticket Clerks
Information Security Analysis	Data Entry Clerks
FinTech Engineers	Administrative and Executive Secretaries
Data Analysts and Scientists	Material-Recording and Stock-keeping Clerks
Robotics Engineers	Accounting, Bookkeeping and Stock-keeping Clerks
Electrotechnology Engineers	Legislators and Officials
Agricultural Equipment Operators	Statistical, Finance and Insurance Clerks
Digital Transformation Specialists	Door-To-Door Sales Workers, News and Street Vendors and Related Workers

Source: World Economic Forum, Future of Jobs Report 2023

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[4] Kennedy Ellen, ChatGPT and Job Security: Is AI Coming for Your Job?, *Kiplinger*, 9 May 2023, https://www.kiplinger.com/personal-finance/chatgpt-and-job-security-is-ai-coming-for-your-job

[5] Navarra Katie, ChatGPT and HR: A Primer for HR Professionals, SHRM, 4 April2023, https://www.shrm.org/resourcesandtools/hr-topics/technology/pages/chatgpt-hr-primer-ai-workplace.aspx

On the tasks levels the same will occur, some tasks will be automated, some will be assisted, and some will be unaffected by the technology. There will also be a large number of new tasks for humans to perform, such as ensuring the accurate and responsible use of new AI tools. As per Accenture, organizations should start by decomposing existing jobs into underlying bundles of tasks. Then assess the extent to which generative AI might affect each task — fully automated, augmented, or unaffected.

As per the World economic forum Future of jobs report 2023, 50% of the surveyed organizations expecting generative AI to create job growth and 25% expecting it to create job losses. The report also claims that 19% of the workforce could have over 50% of their tasks automated by and job losses making headlines, while others expect the technology to enhance jobs.

However, the good news is that this doesn't mean machines will simply replace humans. It is estimated that **40% of all working hours could be impacted by large language models (LLMs) such as ChatGPT, and 65% of the time spent on "language tasks" can be transformed into more productive activity through augmentation and automation**[6].

Analyzing databases detailing the task content of over 900 occupations, Goldman sacks estimate that roughly two-thirds of U.S. occupations are exposed to some degree of automation by AI. They further estimate that, of those occupations that are exposed, roughly a quarter to as much as half of their workload could be replaced. But not all that automated work will translate into layoffs[7].

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[6]These are the jobs most likely to be lost – and created – because of AI. World Economic Forum, 4 May 2023, *https://www.weforum.org/agenda/2023/05/jobs-lost-created-ai-gpt/*

[7] *Generative AI could raise global GDP by 7%.* Goldman Sachs, 5 April 2023, https://www.goldmansachs.com/intelligence/pages/generative-ai-could-raise-global-gdp-by-7-percent.html

2- **Key functions impacted by ChatGPT:**

Despite the early stage of ChaGPT experimentation in business, an impact in some specific functions can be cited as follow:

➢ **Customer services and support:** As per Accenture, Large language models could be useful in tackling the roughly 70% of customer service communication that is not straightforward and can benefit from a conversational, powerful and intelligent bot, understanding a customer's intent, formulate answers on its own and improve the accuracy and quality of answers[8].

➢ **Creativity and Innovation:** Generative AI currently can support speedily in innovation in areas similar to production design, design research, visual identity and social media visual content generation to efficiently reach and appeal clients.

➢ **Coding:** Generative AI is used in coding to significantly lift productivity and speedily converting one programming language to another, mastering programming tools and methods, automating code writing, predicting problems, and handling system documentation.

For example, Accenture is piloting the use of AI to enhance developer productivity by automatically generating documentation – for example, SAP configuration rationale and functional or technical specs. The solution enables users to submit requests through a Microsoft Teams chat as they work.

➢ **Process Automation:** Generative AI's deep understanding of historical context, possible actions, capabilities analyses, and predictive intelligence is catalyzing a new era of hyper-personalization and improved efficiency in both the back and front office—taking business process automation to a transformative advanced level.

➢ **Security:** Generative AI can support information security, protecting against fraud, enhancing regulatory compliance, and proactively identifying risk by drawing cross-domain connections and inferences both inside and outside the organization.

For more details, McKinsey & Company published a more detailed analysis to possible use cases for Generative AI through different functions in business as shown in table (2).

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[8] A new era of generative AI for everyone - The technology underpinning ChatGPT will transform work and reinvent business, *Accenture, 2023*, https://www.accenture.com/content/dam/accenture/final/accenturecom/document/Accenture-A-New-Era-of-Generative-AI-for-Everyone.pdf

Table (2): Examples of generative AI use cases across the business functions

Marketing and Sales	Operations	IT/Engineering	Risk and legal	HR	Utility/employee optimization
Write Marketing and sales copy including text, images and videos.	Create or improve customer support chatbots to resolve questions about products, including generating relevant cross-sell leads.	Write code and documentation to accelerate and scale developments.	Draft and review legal documents, including contracts and patent applications.	Assist in creating interview questions for candidate assessment.	Optimize communication of employees (eg, automate email responses and text translation or change tone of wording of text.
Create product user guides of industry-dependent offerings.	Identify production errors and defects from images to provide rational for issues.	Automatically generate or auto-complete data tables while providing contextual information.	Summarize and highlight changes in large bodies of regulatory documents.	Provide self-serve HR functions (eg, automate first line interactions such as employee onboarding.	Create business presentations based on text prompts, including visualization from text.
Analyze customer feedback by summarizing and extracting important themes from online text and images.	Streamline customer service by automating processes and increasing agent productivity.	Generate synthetic data to improve training accuracy of machine learning models with limited infrastructure input.	Answer questions from large amounts of legal documents including public and private company information.		Synthesize a summary (eg, from text, slide decks, or online video meetings)
Improve sales force by for example, flagging risks, recommending next interactions such as additional product offerings, or identifying	Identifying clauses of interests, such as penalties or value owed through leveraging comparative document analysis.				Enable search and question answering on company's private knowledge data (eg, intranet and learning content)

optimal customer interaction that leads to growth and retention.				
Create or improve sales support chatbot to help potential clients understand technical products and choose products.					Automate accounting by storing and extracting documents using automated emails openers, high-speed scanners, machine learning, and intelligent document recognition.

Source: QuantumBlack AI by McKinsey, December 2022

3- Actions to apply Generative AI inside the organization:

Recently, organizations are starting to experiment generative AI by consuming ready foundation models. However, the enhanced value for many will come when they customize applied models using their own data to address their specific needs.

Generative AI implementation strategy should be guided by specific goals to increase an organization's effectiveness in using AI to unlock new performance limits—elevating employee capabilities, delighting customers, while boosting responsiveness to problems and signals of change. During the experimentation phase, professionals should consider the following actions:

Business-driven mindset and changing culture:

Despite the expected advantages of generative AI tools like ChatGPT to business, it will be challenging to reach an acceptance across the organization especially if the innovation is disruptive to the existing ways of working. In this context, leaders and change agents need to assure acceptance and spread an innovative transformation culture. In order to test the new tools application, organizations must adapt customized models to achieve quick returns, while reinventing the business and enhancing the customers' experience. In this phase, organizations have to assess AI different suitable uses cases and the level of investment needed.

Reskilling People:

Generative AI success requires a significant focus on people reskilling and training as it does on technology. Organizations should invest in talent development to mainly manage two main challenges: creating AI and using AI. This step involves both building talent in technical competencies similar to AI engineering and enterprise architecture and training people across the organization to work effectively with AI updated processes.

Some experts claim that companies are significantly underinvesting in helping workers keep up with advances in AI, which require more cognitively complex and judgment-based tasks.

However, it is worth mentioning that training workers to utilize AI and big data ranks third among company skills-training priorities in the next five years and will be prioritized by 42% of surveyed companies as per the world economic forum future of jobs report 2023.

To thrive in the AI-driven workplace, individuals will need to embrace continuous learning and upskilling. The demand for skills such as data analysis, programming, and AI expertise will rise significantly. Organizations and educational institutions play a crucial role in providing training and development programs that equip individuals with the necessary skills to succeed in the evolving job market[9].

Data Curation

Language models like ChatGPT need vast amounts of curated data. A modern enterprise data platform built on cloud with a trusted, reusable set of data is needed. Cross-functional data associated with enterprise-grade analytics will be able to democratize the data usage across an organization. All business data can then be analyzed together in one place or through a computing strategy.

Benefit-Cost Analysis

Before expanding the practices of LLMS and generative AI, organizations should assure the availability of the right technical infrastructure, architecture, operating model and governance structure needed. Parallelly, they have to focus on a benefit-cost analysis of using these technologies versus other AI or analytical approaches.

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[9] Dheda Govind, Is ChatGPT Already Obsolete? Exploring the Future of AI in the Workplace, Open AI Master, 22 May, 2023.

Part Two
Practical Applications and Use Cases of ChatGPT

1- Top use cases for ChatGPT in the banking industry

The banking industry is constantly aiming to stay ahead of its competitors, by creating the best experience for customers and the most operational efficiency for employees.

In this regard, banks have often been at the forefront of adopting new technology to provide enhanced customer experience and meet compliance requirements. With the rise of AI, banks can now leverage generative language tools like ChatGPT to improve productivity, streamline operations, and enhance their services. ChatGPT can offer intelligence to parts of the banks' operations, including automation, customer support and personalization.

Routine tasks like online banking no longer need to be done manually, as artificial intelligence can manage it. From account balance inquiries to bill payments to transfer requests, banks can utilize ChatGPT to reduce the employees' workload.

The most common uses cases of ChatGPT in banks can include the following:

➢ **Customer Onboarding**

Customer Onboarding is a significant time-consuming process for banks to retain and attract customers. ChatGPT can simplify customer onboarding for banks by automating most of the process, reducing wait times and streamlining the customer experience.

ChatGPT can assist customers to fill in the onboarding form, open an account, answer banking rules and fees inquiries while addressing most of their common concerns. It can also support in the onboarding process by verifying customers identities, checking the accuracy of customers data and offering a customized onboarding experiences for clients.

➢ **Know Your Customer (KYC) and Anti-Money Laundering (AML)**

ChatGPT can assist banks in automating Know Your Customer (KYC) and Anti-Money Laundering (AML) processes by evaluating large amounts of customer data, including personal information and transaction history and identifying potential compliance issues. It can also verify customer identity, check customers against restricted lists and highlight suspicious transactions. This support is critical for banks to mitigate financial crime risks and maintain regulatory compliance.

➢ **Customer Service**

Banks always face high volumes of inquiries that are too much for their agents to handle, but ChatGPT can reduce that volume and leave more time for human service agents to answer more complex inquiries.

Integrating ChatGPT into the bank's customer services system to provide real-time answers can reduce wait times and improve the overall experience. Banks can integrate ChatGPT into a chatbot or virtual assistant to reduce the volume of phone inquiries oriented to the customer service team. It can handle common customer inquiries, such as account balance inquiries or loan application status updates.

➢ **Product Design**

One of ChatGPT's abilities is to take on a specific customer persona, e.g., a doctor, retiree, CEO, or engineer. ChatGPT can tell a bank: How to pitch treasury management services to a Controller at a municipality, and how a lawyer would like to be notified that the bank has placed a hold on their checking account[10] .

➢ **Loans Origination and Document Processing**

In the loan request process, ChatGPT can provide real-time guidance and support to the customers and employees as well. The model can assist banks in collecting customer data, analyzing creditworthiness, and providing real-time feedback on loan applications.

With ChatGPT's capability to evaluate vast amounts of data and make accurate predictions, banks can reduce the risk of default and make informed decisions about loan approvals. It can automate the underwriting, documentation and approval processes, while verifying customer information, calculating eligibility and assessing risk.

From a cost perspective, efforts and time will be minimized then, employees will have more time to work with customers once the customer is considered as eligible for the loan.

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[10] Shevlin Ron, Thanks To ChatGPT, 2023 Is The Year Of The Chatbot In Banking, Forbes, 1 Feb 2023, https://www.forbes.com/sites/ronshevlin/2023/02/01/thanks-to-chatgpt-2023-is-the-year-of-the-chatbot-in-banking/?sh=2688cf7657fd

ChatGPT can be useful also to process a large number of documents and need to extract specific information from the paperwork. The technology can automatically extract information from financial documents, such as invoices or loan applications, which ultimately saves time by reducing manual data entry[11].

> ### Wealth Management

ChatGPT can support banks in providing wealth management services to their customers by analyzing customer data and providing personalized investment recommendations and advices based on their individual financial goals, status and risk tolerance.

> ### Compliance and Fraud Detection

ChatGPT can help banks comply with regulatory requirements by monitoring bank transactions and identifying potential violations. This can help banks avoid financial penalties and reputational damage.

All banks should offer a high-level security. While ChatGPT certainly can't handle all security measures, it can serve as an extra level of protection. ChatGPT has incredible analysis skills and can be used to help human analysts detect fraud through its massive neural network data. ChatGPT can also validate users, verify information, monitor activity and identify suspicious patterns.

This can help banks protect customers' financial assets and reduce losses from fraud. Bank personnel can even set up alerts, so security professionals get notified of suspicious activity[12].

> ### Financial Planning

Banks can use ChatGPT in financial literacy and financial planning related activities. Banks can use the model to provide customized financial recommendations, including budgeting, debt management, investment advices and retirement planning. ChatGPT can also analyze customer data and offer personalized financial and product advices based on customer demographics, risk tolerance, and investment goals. For example, if a customer

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[11] Muhn Julie, Five GPT-3 Use Cases for Banks and Fintechs, *Finovate*, 18 January 2023, https://finovate.com/five-gpt-3-use-cases-for-banks-and-fintechs/

[12] Marr Bernard, Top 10 Use Cases For ChatGPT In The Banking Industry, *Forbes*, 8 March, 2023, https://www.forbes.com/sites/bernardmarr/2023/03/08/top-10-use-cases-for-chatgpt-in-the-banking-industry/?sh=79597b292fbf.

is asking for a new credit card, ChatGPT can analyze their spending habits, preferences and financial situation and recommend the credit card that will work best for them.

➢ **Virtual 24/7 Assistance for Banking**

With customer service excellence being a top priority for banks, the ability to provide 24/7 assistance is something banks can use to differentiate themselves from their competitors. ChatGPT's advanced algorithms can analyze large amounts of data and provide customers with real-time information and suggestions while managing their accounts, executing transactions or facilitating bills payments.

➢ **Risk Management**

Banks must be able to identify potential risks and market trends to gain the trust of their customers. ChatGPT can assist banks in managing risks factors by analyzing vast amounts of data. This is in addition to the model ability to highlight suspicious transactions and potential fraud.

The model can also analyze market trends and updates to assess potential economic and political risks that may impact the bank's performance. With ChatGPT, banks can continually learn from previous risks and enhance risk management processes over time.

➢ **Market Research and Sentiment Analysis**

From a marketing perspective, ChatGPT can be used to determine brand awareness and overall sentiment toward an organization or a brand. By analyzing customer feedback and social media interactions, banks can gain insights on new product development and measure customer satisfaction over time.

Banks should be aware of their customers specific needs and concerns. ChatGPT can conduct market research surveys and questionnaires to collect insights, then analyze that data to generate helpful feedback on customers preferences and needs.

While many of these tools and capabilities have been available in the banking industry, they can be more powerful and more cost effective in the long run because of the range of use cases the technology may present.

➢ **Marketing Email**

ChatGPT can automate and personalize marketing tasks and communications with customers. This can be done through personalized email campaigns and offers based on customer preferences and behaviors. Whether subject line optimization, email

segmentation, ChatGPT can produce the right information with a more appropriate writing process.

As per Accenture, one multinational bank is using generative AI to change the way of managing volumes of post-trade processing emails—automatically drafting messages with recommended actions and routing them to the recipient. The result is less manual effort and smoother interactions with customers.

➢ **Social Media Management**

ChatGPT can support in banks' social media campaigns and posts through scheduling, advertising and analysis. It can optimize social media posts based on audience behavior, preferences and peak usage times for scheduling. In advertising, ChatGPT can analyze data and recommend the best ad formats and creative elements for a bank's campaign. As for analysis, the AI will analyze data and provide insights on customer behavior, preferences and trends to provide actionable insights for creating a stronger strategy[13].

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[13] What Are ChatGPT's Potential Impacts on Banking? *Entrepreneur,* 16 February 2023,
https://www.entrepreneur.com/science-technology/what-are-chatgpts-potential-impacts-on-banking/445019

2- Human Resources (HR) ChatGPT use cases:

HR teams can leverage AI tools like ChatGPT to streamline their processes and maximize efficiency. Similar to the external customers ChatGPT can be a powerful tool for HR professionals to enhance the internal customers "employees" overall experience in a variety of ways.

ChatGPT can take work from every job segment in different areas. HR technology tools are developing rapidly to perform all HR basic tasks. As per SHRM, in the near future no human will write an HR policy or a job description. Instead HR professionals will use ChatGPT and send the request to be crafted and then continue to ask to make revisions and edits until they reach the targeted quality and output. The handled tasks currently managed by two to three HR professionals will be handled by only one HR professional and supported by an AI assistant. To be more precise, HR professionals who understand and use AI and ChatGPT are likely to replace HR professionals who don't.

HR professionals are irreplaceable, smart knowledgeable HR professionals with clear vision will always be needed to narrate to ChatGPT exactly what they want to create.

Some specific use cases for ChatGPT in the field of human resources can include the following:

➢ **Recruitment and Employee Onboarding**

ChatGPT can automate repetitive tasks in the recruitment process and make more informed hiring decisions. It can help in job descriptions content, screening resumes, LinkedIn profiles, and scheduling interviews. In the interviewing stage, ChatGPT can create personalized interview questions based on the candidate's profile and experience. This will open up ideas for HR specialists, save time allowing them to ask each job applicant more relevant and insightful inquiries.

Automating these types of tasks can reduce the workload on HR team and free up time for them to focus on more strategic tasks. The model can also provide real-time support to answer the candidates, new hires and employees frequently asked questions about the company and the HR related processes, policies, cultures and benefits. It can also help in the identification process to choose the best candidates based on an analysis to their skills, education and experience.

➢ **Performance Evaluation**

ChatGPT can support in the performance management process by providing heads and managers with guidance and tips to effectively conduct performance assessment and responding to employee questions about performance metrics, criteria, feedback and final results.

ChatGPT can simplify HR professionals' responsibilities related to performance reviews, feedback loops, and salary increases decisions. That's because the model can quickly and easily scan large set of salary levels data, analyze benchmarks and expectations across different departments, companies, or even areas. Combined with its ability to record and summarize an employee's performance across an entire year, leaders would enjoy much more clarity and data-based insights during appraisals and promotion decisions[14].

➢ **Employee Engagement and People Analytics**

ChatGPT can collect insights from different forms or surveys results, covering insights on employees' satisfaction, suggestions, or other feedbacks. These can support HR professionals to better analyze the overall employee sentiment and engagement without wasting time on routine tasks. The insights' analysis in this context allow HR professionals to take appropriate actions as it could even predict when talented employees are considering leaving the company. Building on the potential benefit, employee engagement, productivity and satisfaction will be improved which can led to minimized turnover rates while drive business success.

➢ **Compliance**

ChatGPT can assist in providing employees with up-to-date information on compliance-related matters like employment laws, payroll and tax regulations, and health and safety protocols. The model can also help HR departments track and monitor employee compliance with HR policies, such as attendance, leave requests, and work hours[15]

Thus, HR professionals can use ChatGPT to ensure that their HR policies and practices are compliant with all regulations to prevent legal and reputational risks.

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[14] ChatGPT in HR: Applications, Limitations, and Adoption, *Nestor*, 14 March, 2023, https://nestorup.com/blog/chatgpt-in-hr-applications-limitations-and-adoption/

[15] Marr Bernard, The 7 Best Examples of How ChatGPT Can Be Used In Human Resources (HR), Bernard Marr & Co.,19 March 2023, https://bernardmarr.com/the-7-best-examples-of-how-chatgpt-can-be-used-in-human-resources-hr/

In addition to the above-mentioned use cases of ChatGPT in the HR area, additional examples of HR tasks, ChatGPT can potentially perform can be summarized as follow[16]:

- Crafting job descriptions.
- Composing employee handbook materials and policy manuals and updating them.
- Drafting e-mails to job candidates, including offer letters.
- Checking HR laws and regulations.
- Summarizing research and reports.
- Streamlining administrative tasks, such as reminders about events and holidays.
- Developing personalized career development plans.
- Scanning and screening resumes.
- Providing employee self-service.

[16] Navarra Katie, ChatGPT and HR: A Primer for HR Professionals, *SHRM,* 4 April2023

3- Training and Learning & Development (L&D) ChatGPT potential use cases:

Advancements in generative artificial intelligence (AI) like ChatGPT can have an impact on the way employees are trained and developed. The inquiries that trainees can address to ChaGPT can be similar to: What are the latest trends in a specific field of expertise, how can I develop my leadership skills? Provide me with useful resources for project management and so on....

Some specific use cases for ChatGPT in the field of training and L&D can include the following:

➢ **Customized learning experience:** ChatGPT can provide employees with customized development plans and training content by analyzing their specific needs and skill gaps. Through intelligent conversations, ChatGPT can recommend relevant training resources while enhancing the effectiveness of employee training programs.

➢ **Virtual mentorship:** With ChatGPT, trainees can have access to virtual mentors who can guide them through various phases of the learning experience. This model can respond to the inquiries, provide relevant insights, and offer practical advice, simulating the experience of communicating with a knowledgeable mentor.

➢ **Real-Time support:** ChatGPT can be considered as a real-time support system, available 24/7 to answer employee queries, troubleshoot problems, and provide immediate assistance during the leaning different phases.

➢ **Schedules and Reminders:** L&D professionals can also automate training and development related tasks with ChatGPt, including scheduling training sessions or sending reminders to employees about upcoming training programs and awareness events.

All the mentioned features limit the dependency on human trainers or support staff, ensuring speed access to the needed information and resources.

Part Three
ChatGPT Limitations and Recommended Steps for Executives

1- The limitations and drawbacks of using ChatGPT in banks:

After exploring the potential advantages and use cases of ChatGPT in banks and in the HR and L&D areas as a considerable new resource, it is important to parallelly mention the drawbacks and limitations that leaders and professionals should consider:

➢ **Cost**

While ChatGPT research preview is free to use, the cost of implementing it into a banking or HR system would not be. Employers must consider how much it would cost to integrate ChatGPT into their system. In addition to maintain ongoing operational costs and keep up with regulatory costs. ChatGPT usage might not be accessible to smaller banks with limited budget.

➢ **Security**

Despite the strict security and privacy measures of ChatGPt, banks need to take extra cautious actions to safeguard the security of the customers and the employees. This can be considered as a burden for banks, making the process less efficient. Users should not share any sensitive or confidential information following a crucial rule stressing on not share anything that can not be publicly announced. Banks, HR team and employees need to be very careful about the type of information they share with ChatGPT. The concerned teams will need to collaborate with the IT department and cybersecurity experts to ensure the privacy and security of the shared information.

➢ **Ethical considerations**

As with any AI system, there is a risk of unethical use of ChatGPT in customers related tasks and employee training. Organizations must establish clear guidelines and policies to prevent the misuse of AI technology, ensuring that customers and employee privacy and data security are fully protected.

➢ **Limited human interaction and lack of emotional intelligence**

ChatGPT lacks emotional intelligence and cannot fully understand complex human emotions. The process automation may negatively impact the job opportunities in the market, while reducing the human interactions between employees and customers. For customers who prefer to speak directly with employees, it can be frustrating to go through many steps with artificial intelligence until the system allows them through. It is essential to recognize that while it can provide valuable insights and guidance, it cannot

replace the empathy of human connection that is often required in customer services and employee training and development.

> **Potential for bias**

AI models like ChatGPT are trained on vast amounts of data, and if the training data contains biases, the AI system may inadvertently amplify them[17]. This can lead to biased recommendations or discriminatory responses, affecting the fairness and inclusivity of banking operations and employee capacity building activities. Specialists would need to check that the bot isn't biased and all requested assessment and feedback are generated fairly.

> **Technology dependence and lower critical thinking**

Technology is an incredible resource, but it can never fully substitute humans. The reliance on ChatGPT can lead to dependencies that might cause mistakes and inefficient decision-making process. In time, over-reliance on ChatGPT could limit people's critical thinking skills. And, in a world of work where problem-solving and decision-making are in high demand, both employers and employees would be negatively affected. Human Resources and leaders should remind people that tools are meant to empower them, not to reduce their own capabilities. The right balance between technology and humans is the optimum solution. As for the training industry, while ChatGPT can provide insights and information, it is essential to maintain a balance by including human trainers and mentors in the training process.

> **Intellectual property rights**

It's still essential to review information and responses from ChatGPT for accuracy before copying, pasting and sharing the outputs. Unlike a Google search, ChatGPT doesn't show the source of the information. If different organizations or banks ask the same inquiry and receive the same idea or solution, this can lead to possible disputes as no one will be able to claim ownership.

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[17] The Impact of ChatGPT on Employee Training and Development, Northwest Executive Education, 5 June 2023, https://northwest.education/insights/careers/the-impact-of-chatgpt-on-employee-training-and-development/

➢ **Rapid Advancement in AI Technology**

Some experts claim that ChatGPT is becoming obsolete due to the rapid advancements in AI technology. For instance, Google's Bard chatbot and OpenAI's GPT-4 are examples of more advanced AI products that can describe images and understand different media beyond written language. These advancements push the boundaries of AI capabilities, potentially surpassing ChatGPT in terms of functionality and performance[18].

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[18] Dheda Govind, Is ChatGPT Already Obsolete? Exploring the Future of AI in the Workplace, Open AI Master, 22 May, 2023.

2- <u>Recommendations and initial steps for executives:</u>

ChatGPT is not the first AI chatbot released to the public, but it has been widely considered far more advanced than its predecessors, solving complicated problems, writing college-level essays and summarizing regulatory filings, though its accuracy has been called into question[19]. Due to this reason, several large banks — such as **JPMorgan, Bank of America, Citigroup, Deutsche Bank and Goldman Sachs — have restricted employees' use of ChatGPT as per Forbes.**

After screening the potential use cases and the limitations of using ChatGPT in banks and HR functions and based on the implications of this kind of technology for the industry, bankers should acquaint themselves with it similar to other technologies. Banks should begin with reviewing how these technologies fit within their current controls and review of third-party software[20]. Banks should also be attentive on the cybersecurity and monitor regulatory compliance to be ready for any increase in phishing attempts that could be intensified by the use of this technology. Once banks acquire a comprehensive understanding to leverage this technology, they can experiment its tools. Early use cases banks may explore include research and summation, idea and outline of topics formulation, and building customer personas for marketing campaigns.

Despite the potential of ChatGPT, and similar conversational AI technologies, humans should be part of the loop to review, validate and customize the produced output.

Executives should work hard to identify the parts of their business that will be mostly affected by the new technology and implement a mechanism to monitor it. A very essential action is to build a dedicated cross-functional team, including data science practitioners, legal experts, and functional business leaders, to think through basic points, such as:

- Analyzing the overall impact of the new technology application on the business value chain.

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[19] Bushard Brian, Workers' ChatGPT Use Restricted At More Banks, 24 February 2023, https://www.forbes.com/sites/brianbushard/2023/02/24/workers-chatgpt-use-restricted-at-more-banks-including-goldman-citigroup/?sh=71312cc06cf4

[20] Jackson Ryan, understanding (and using) ChatGPT in banking, ABA Banking Journal, 28 April 2023, https://bankingjournal.aba.com/2023/04/understanding-and-using-chatgpt-in-banking/

- Identifying the jobs and functions that will be supported or disrupted by the new technology.
- Deciding the proper strategy to cope with the changes: Watching the technology evolvement, investing in pilots, building a new business model, applying different strategies based on selected areas.
- Studying the limitations of the model and deciding the criteria for selecting use cases.
- Detecting the legal and security standards to maintain stakeholders trust.
- Developing multidisciplinary innovation teams that include legal and human resource staff.
- Assuring acceptance and spread an innovative transformation culture among different teams.

Conclusion

ChatGPT has several promising use cases in banks and in HR and L&D areas that can increase productivity and efficiency if managed properly. Employers should reinvent work to maximize generative AI value in business. Most jobs and industries are only partially exposed to automation and are more likely to be complemented rather than substituted by AI. Business leaders must lead the change and proceed with jobs and tasks redesign while reskilling people. They also need to study the generative AI expansion impact on how the organization works, with implications for IT, strategy, culture, HR and training and other areas.

To cope with the changing competitive environment, organizations should take steps to decompose jobs into tasks to analyze where AI has a chance to save time and improve output. The potential for AI to reshape the world of work means organizations should ensure their staff are developing the new skills that will be required to use generative AI effectively.

Despite ChatGPT promises, business leaders must proceed with eyes wide open, as this technology imbed many practical, ethical and security challenges and limitations. ChatGPT application is still in an early stage of maturity, thus professionals have to well consider the use cases implications prudently to determine the appropriate level of human oversight. The possible combination of labor cost savings, new job creation, and a productivity boost for non-displaced workers can raise productivity and efficiency in business if managed wisely.

As for the use cases in Human Resources functions especially the training and capacity building aspects, ChatGPT has opened up new features for HR and L&D professionals, to provide personalized and accessible working and learning experiences. By leveraging its capabilities while being mindful of its limitations, organizations can create a blended learning and efficient working environments that maximize the potential of AI while maintaining the human touch.

While ChatGPT can enhance working and learning experiences, it cannot replace the human element of empathy and connection that is often crucial in HR and training development. Additionally, the potential for biases and the risk of overreliance on AI should be carefully addressed to ensure fair and inclusive banking system and working environment. To fully harness the benefits of ChatGPT, organizations should strike a balance between AI and human expertise. Ethical considerations and clear guidelines are essential to prevent the misuse of AI technology and protect customers and employee's privacy and data security.

Glossary

- **Generative AI:** is a type of Artificial Intelligence (AI) that can create a wide variety of data, such as images, videos, audio, text, and 3D models. Generative AI is the umbrella term for the ground-breaking form of creative artificial intelligence that can produce original content on demand. Rather than simply analyzing or classifying existing data, generative AI is able to create something entirely new, whether text, images, audio, synthetic data, or more.

- **ChatGPT**: is a generative AI chatbot interface built on top of OpenAI's GPT-3.5 large language model. ChatGPT and ChatGPT plus, which uses (GPT-4) can intake, comprehend and produce a response using human-like language rather than giving an answer that sounds like a robot. It can explain a subject, write an essay, run a calculation, or simply have a conversation. The program is equipped with a transformer-based neural network with extensive data and information. This means that when a human user inputs a command or question, the AI intakes it, processes it, analyzes it through its deep neural network and produces an output in a text pattern that mimics human diction. ChatGPT can have entire conversations, admit mistakes, challenge incorrect premises and write essays, scripts, articles and headlines.

- **Knowledge worker:** is an individual who is engaged in work that requires a high level of knowledge, analytical skills, and creativity. They are often employed in professional and managerial positions in a variety of industries, including information technology, engineering, medicine, business, and academia.
Knowledge workers are often highly educated and have a strong understanding of the theories and principles in their field. They are able to apply this knowledge to solve problems and create new solutions. They are also able to communicate effectively and work collaboratively with others.

- **Grant writer** is a professional who works to secure funding for various programs and projects administered by nonprofit organizations.

- **Prompt engineering** is a relatively new discipline for developing and optimizing prompts to efficiently use language models (LMs) like ChatGPT for a wide variety of applications and research topics. Prompt engineering skills help to better understand the capabilities and limitations of large language models (LLMs).

- **Data curation:** is the process of creating, organizing and maintaining data sets so they can be accessed and used by people looking for information. It involves collecting, structuring, indexing and cataloging data for users in an organization, group or the general public. Data can be curated to support business decision-making, academic needs, scientific research and other purposes.

➢ **Sentiment analysis (or opinion mining):** is a natural language processing (NLP) technique used to determine whether data is positive, negative or neutral. Sentiment analysis is often performed on textual data to help businesses monitor brand and product sentiment in customer feedback, and understand customer needs.

➢ **People analytics**: is collecting and applying organizational, people, and talent data to improve critical business outcomes. It enables HR departments to gain data-driven insights to make decisions on different people processes and turn them into actions to drive the performance of an organization.

➢ **Data Democratization:** is about facilitating organizational data's access to as many employees as possible, given reasonable limitations on legal confidentiality and security. The idea is to embrace data driven decision making into the organization's culture, and to make data available not only to analysts and executives, but also to non-technical or non-specialist employees to observe, analyze, use data-driven in decision making, or make other use of it. For more details about data democratization, check EBI current trend report: https://masrafeyoun.ebi.gov.eg/data-democratization/

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