Demystifying Artificial Intelligence:

3 Use Cases for the Public Sector and Higher Education

By Asim Iqbal

The artificial intelligence (AI) revolution is upon us. In November 2022, an underlined application named Chat GPT launched and quickly accumulated some 100 million users. In just a few short months, a vision of a generative AI capable of answering queries, drafting content, and even passing bar exams captured the imagination of the world. In short order, the field became crowded with applications such as Auto-GPT, Bard, Bing, Chatsonic, Copy, Claude, Hix, Jasper, Perplexity, and YouChat.

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Groundbreaking as this wave of chatbot technology is, there is so much more to AI than drafting cover letters and helping with homework. For public sector agencies and higher education institutions in particular, AI is a game-changer, streamlining processes, energizing customers, and freeing up staff members to perform more valuable activities. In this e-book, we offer three ways the public and educational sectors can leverage AI to transform their agencies.

① Data Classification and Decision-making

AI "learns" by letting its algorithms go to work on large sets of data—the same datasets that would take humans weeks, months, or even years to comb through. Not only does this allow AI to discover patterns that humans may never have come up with, but it also allows leaders to ask questions they may never have thought of. This is particularly useful in the process of benchmarking, or the measuring of performance against competitors in order to discover areas of improvement. In a matter of seconds, a mass of raw data can turn into actionable intelligence and a strategic asset.

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This ability to classify data and change paradigms has important practical applications. In the realm of higher education, for example, AI can analyze grade and attendance data. Based on patterns and previous outcomes, it can then determine when an intervention is necessary with a particular student. This empowers colleges to act in a critical and timely manner, which improves retention and graduation rates.

In the public sector, the implications for community and public health are equally promising. Instead of grading a community's overall health based on basic metrics like as education or income levels, for example, AI can sift through a much wider range of metrics. This allows a public health agency to gain a much deeper understanding of problems facing a community, and areas to improve.

The benefits of AI are clear: the ability to take into account an exponentially larger set of variables and their interrelations, informing more intelligent decision-making and an enhanced power to act.

AI Empowers Local Governments To Understand Their Constituents

In the past, public agencies relied on imprecise metrics to measure the health of their communities. By leveraging AI, agencies can quickly gather data from disparate sources to create a more accurate picture of their communities—allowing them to provide more timely and relevant services and interventions.

AI can help agencies measure:

» Neighborhood safety (based on police crime statistics) and walkability

» Knowledge infrastructure (like libraries and community centers)

» Hospitals and community clinics

» Grocery stores, markets, and the presence or absence of "food deserts"

» Businesses and the local job market

» Parks and green spaces, via GIS mapping

» Diversity of income and ethnicity

② Data Extraction and Entry

In addition to the datasets mentioned above, the digital age has ushered in an influx of data channels in the form of email, chats, social media, and more. Not only is it labor-intensive for staff to handle and respond to all of these channels, but the genuinely useful information in all of this flow can easily get lost. Wouldn't it be amazing to have a tool that can extract the info from those channels, enter it into a new system, and then be able to act upon it?

Enter AI, which can do precisely that for both the public sector and higher education. Let's say, for example, that a citizen emails a county sanitation department asking how to dispose of a mattress. An AI tool can read the email and auto-reply with resources and links to offer a solution. Instead of having to research and compose a response from scratch, a human will only need to validate the response that was already created.

The same use case applies to higher ed. If a student needs to submit financial aid documents, the financial aid office can use AI to ensure that required files have been attached—and if not, can respond and tell the sender what is missing. And instead of being limited to office hours, this process can take place around the clock. As a result, staff is freed from mind-numbing micro-tasks to spend time on more valuable activities, such as providing personalized assistance and counseling to students in need.

> AI can read emails, check to ensure that the correct files are attached, and auto-reply with various options and responses—24 hours a day.

Summarizing and Making Recommendations—Securely

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Sifting through data of any kind is tedious and time-consuming, whether it's a student trying to access their health information or an executive seeking takeaways from a recorded meeting. AI helps here, too, making it easy to organize, search, and access data from all types of artifacts, including PDFs, voice, video, and more. And since information is sensitive and not all data should be public-facing, AI also helps safeguard sensitive data from unauthorized users. Leverage AI to tag specific data files, and your bot will inform users that certain information is classified and requires credentials.

When making connections at an airport, for example, busy travelers don't want to waste valuable time searching through websites on their phones. To help them find answers quickly, a voice-activated bot can crawl the airport's website to provide a human-centered answer—in seconds. And at colleges and universities, instead of old-fashioned help desks and unending lists of online FAQs to scroll through, an AI-powered bot can help students and their families get answers fast, via web pages, PDFs, or even videos. In both cases, this allows staff to orient their time to more value-added work.

The power of AI goes beyond providing simple answers to queries, though. Mental health needs on college campuses have skyrocketed, for example, with nearly two-thirds of college students meeting the criteria for at least one mental health problem during the 2020–2021 school year. So acute is the crisis that it has overwhelmed college healthcare centers. Instead of waiting for a response from a case manager, AI empowers students to find the solutions they need—immediately. AI also allows institutions to customize resources and create filters based on their student body. For instance, if community members speak Spanish, the university can highlight which services are available in-language and which are not. With AI as the first-line responder to answer student questions, case workers can then intervene more efficiently in serious cases that require urgent attention.

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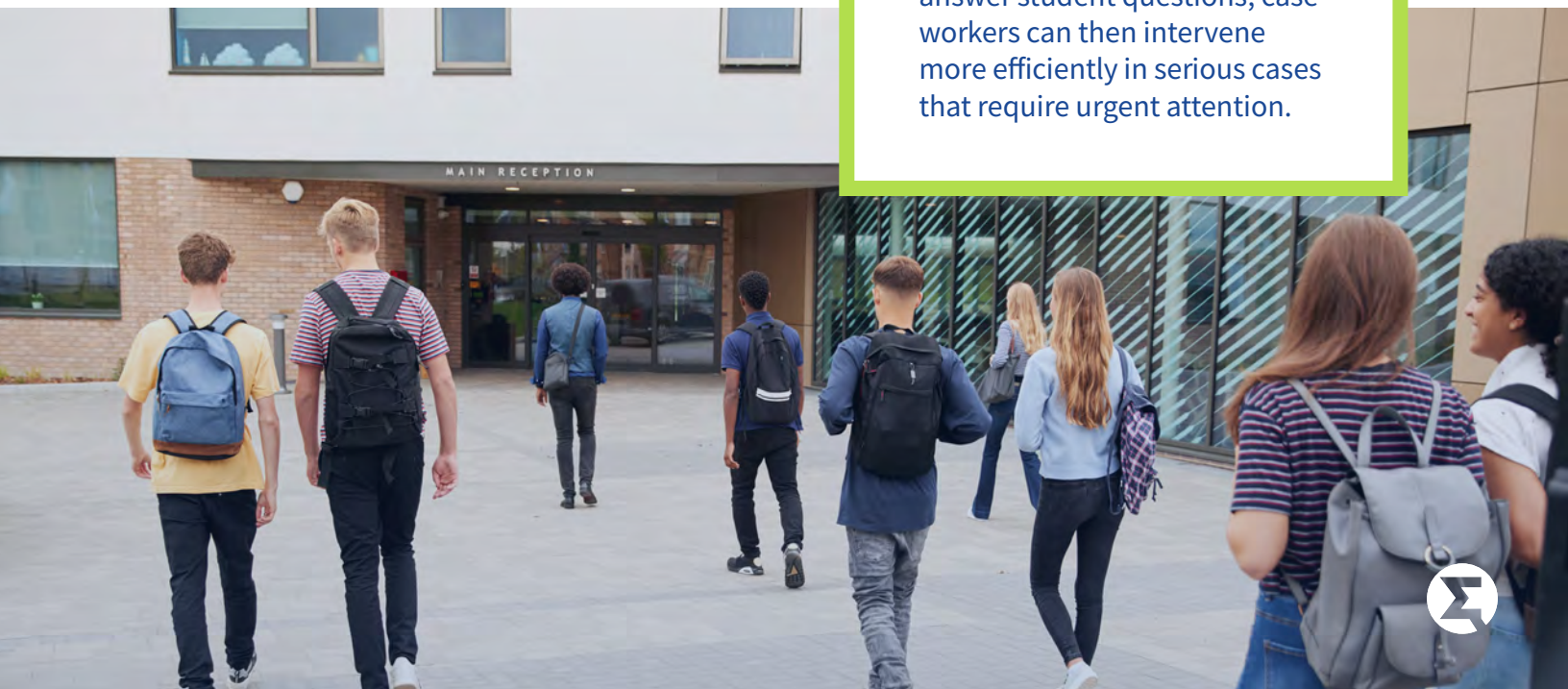
Empower Your Team To Use AI

AI is here, and it's not going away: according to Forbes, the global AI market is expected to expand at a compound annual growth rate of 37.3% through 2030. By then it will be contributing some $15.7 trillion to the global economy, more than the current output of China and India combined.

In the context of AI's rapidly expanding use, the simple fact is that if you don't take the lead on the AI issue, your staff members will start to use it in their own ways—with mixed results. The smart way forward is to empower and excite your team to leverage AI safely by creating guidelines and standards for usage. Here are five ways to start.

Implementing AI the Safe Way

1. Engage in detailed conversations with an expert regarding areas such as hallucinations (a phenomenon where AI perceives nonexistent patterns or generates false information), security, workforce realignment, and cost control.

2. Make standards available to your employees and update them on a regular basis.

3. Perform due diligence on security and compliance.

4. Set standards for the AI tools that can be used.

5. Let employees know they're responsible for the end results: good or bad. Just as no teacher would accept plagiarism from a student, AI is no excuse for providing unsatisfactory work or customer service. AI at its best is designed to make a human response more effective—not do away with it altogether.

To get the most out of AI, your solution must be built right, and the best way to do that is to find a trusted partner. Enquizit is an AWS premier consulting partner with over 20 years of delivering innovative IT solutions for both the public sector and higher education. Find out more about our services or contact us here.

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