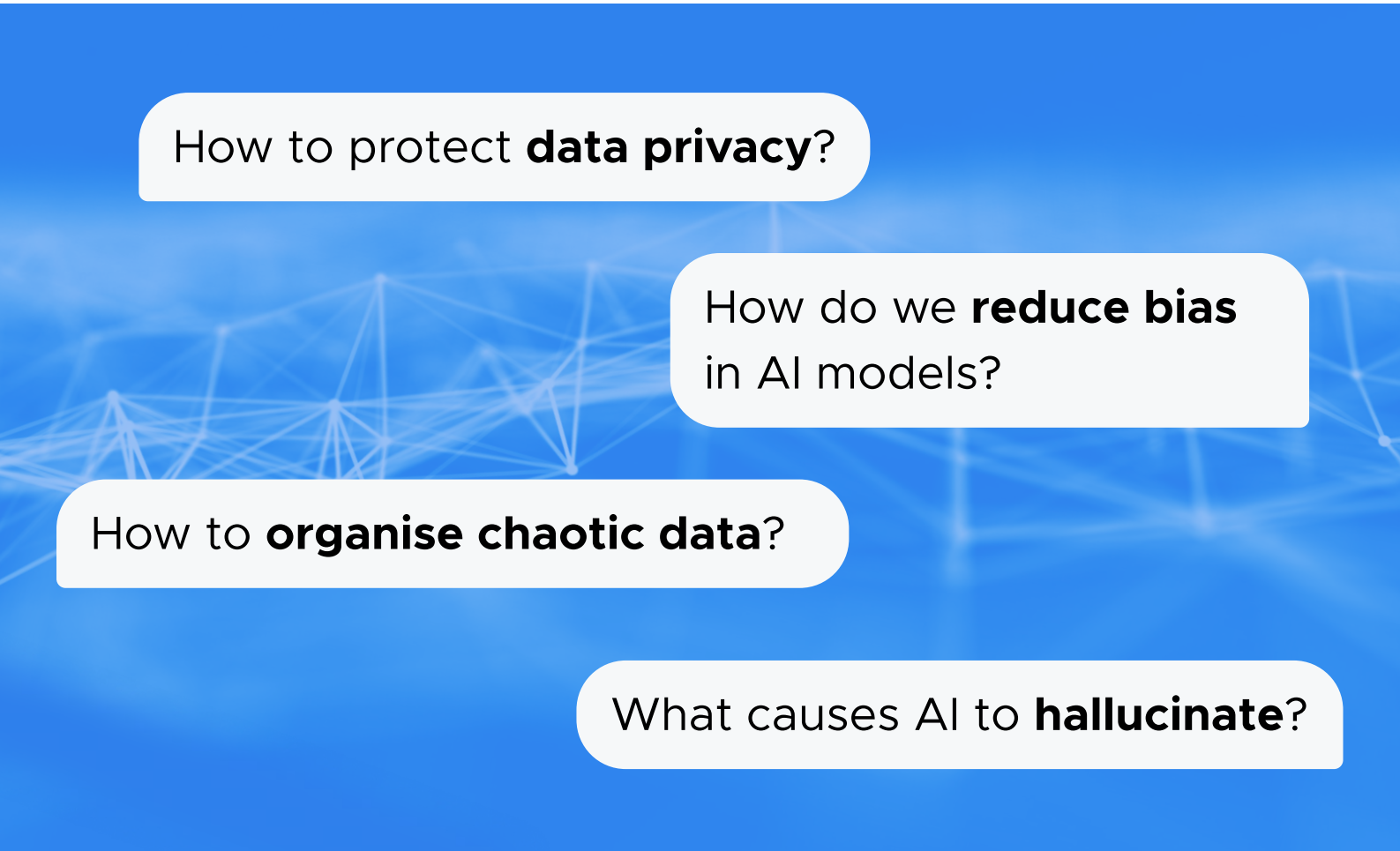
BotsCrew

AI Adoption

FAQ Guide to Navigate the Concerns and Unlock the Potential



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What is this FAQ Guide?

This AI Adoption FAQ Guide equips business leaders with essential insights on navigating AI challenges — such as bias, hallucinations, and more — while providing strategies to mitigate risks.

Who is it for?

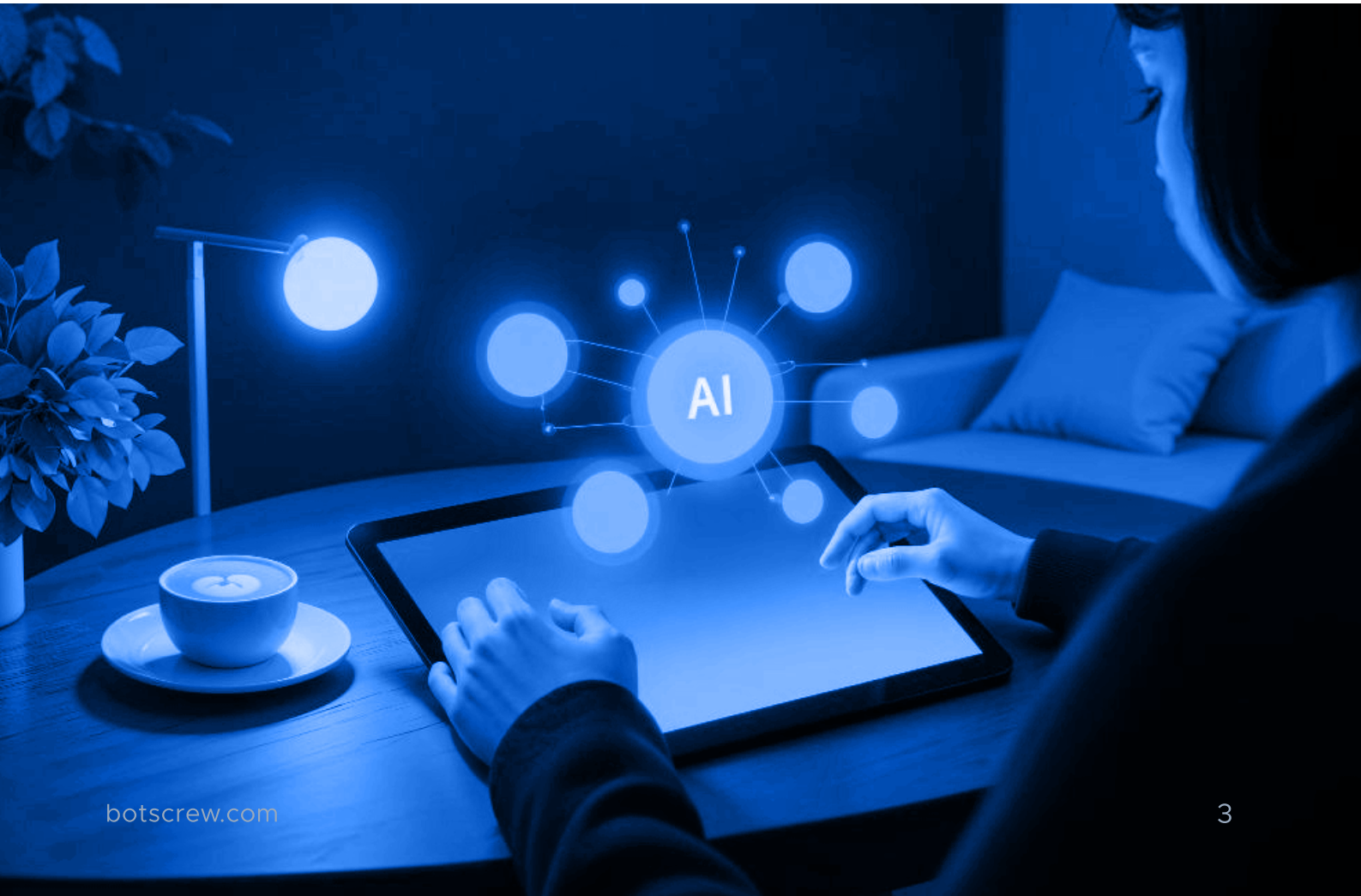
From CEOs to data officers, this guide is tailored for those who want to harness AI's opportunities responsibly for their organization and stakeholders.

Why use it?

To unlock AI's value while managing risks through how-tos, case studies, and practical tools.

How was it developed?

By synthesizing expert interviews, cross-disciplinary research, and analyzing AI risks across industries.



Artificial Intelligence (AI) is rapidly becoming the centerpiece of business transformation. According to Goldman Sachs Research, the global AI market is expected to reach **$200 billion by 2025,** up from $38 billion in 2019.

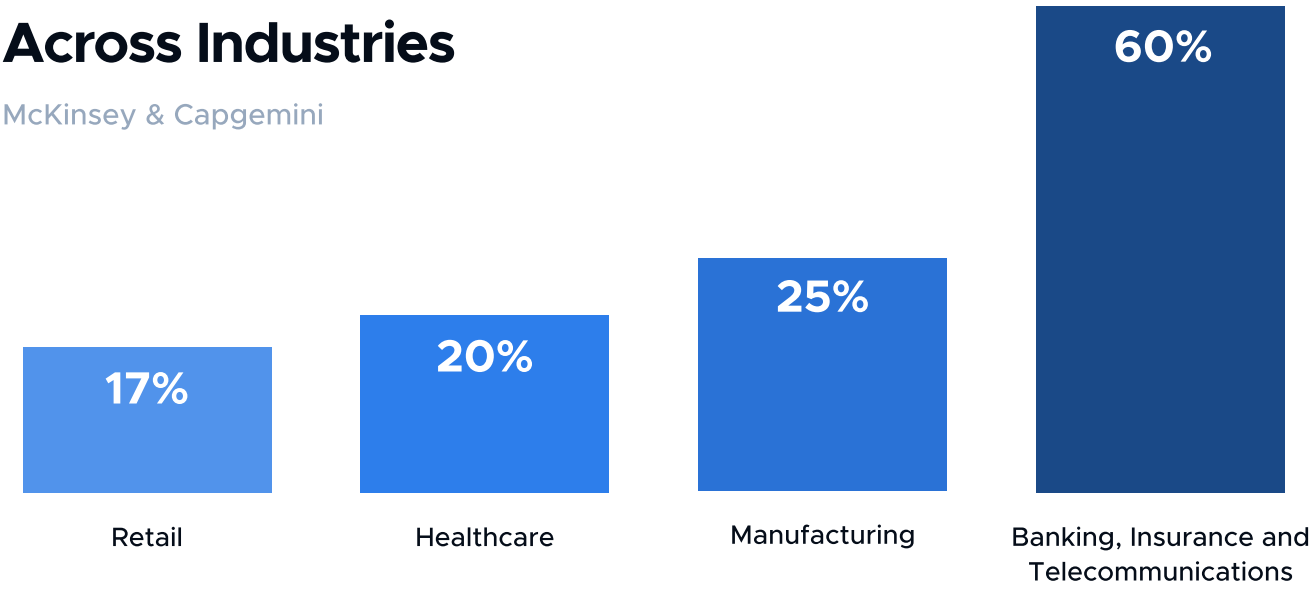
From automating routine tasks to making data-driven decisions, AI promises to reshape industries, making them faster, smarter, and more efficient. No wonder **91.5%** of leading businesses have ongoing investments in technology (MIT Sloan).

60% of large companies in industries like banking, insurance, and telecommunications are using AI to optimize processes (McKinsey). Manufacturing **(25%),** healthcare **(20%),** and retail **(17%)** are among the sectors seeing significant AI uptake (Capgemini).

Moreover, according to Accenture, companies implementing AI report a **40% increase** in productivity on average.

AI Adoption Across Industries

McKinsey & Capgemini



However, when adopting AI, business owners frequently grapple with a range of concerns, especially regarding its trustworthiness, ethical considerations, and how it will affect day-to-day operations. To help you navigate these complexities, we've outlined the **five most common challenges** and practical solutions to overcome them and ensure a successful AI integration.

1. Hallucinations: When AI Goes Off-Script

A 2023 survey by Gartner found that **55%** of businesses cited AI hallucinations as one of the main barriers to adoption.

Imagine asking your AI to draft a financial report, and it spits out completely fabricated numbers. This is a phenomenon, known as ***AI hallucinations.***

It occurs when AI systems produce either factually incorrect, completely fabricated, or beyond the boundaries of its training data that may seem plausible on the surface but are false. These hallucinations can pose challenges, particularly in industries or use cases where precision, accuracy, and trust are paramount.

Here are some examples:

Healthcare

Use Case:

AI diagnostic agents analyze medical images, predict patient outcomes, or recommend treatments.

Risk of Hallucination:

If AI systems generate inaccurate diagnoses or treatment recommendations, it could lead to incorrect medical decisions, endangering patient health and even lives.

Legal

Use Case:

AI legal research assistants, contract analysis systems, or AI-generated legal advice.

Risk of Hallucination:

If AI tools inaccurately interpret laws or misread contract terms, it could lead to faulty legal advice, compliance issues, or costly lawsuits.

News and Media

Use Case:

AI-generated news articles, summaries, or fact-checking tools.

Risk of Hallucination:

If AI systems fabricate or distort facts in a news article, it could spread misinformation, damage reputations, or mislead the public.

Real-World Example:

> In 2022, Avianca Airlines sought to dismiss a lawsuit by Roberto Mata, who claimed he was injured on a flight. Mata's lawyers cited 6 precedent cases, including Varghese v. China Southern Airlines, but the court found these cases **were fabricated.** A member of Mata's legal team admitted to using ChatGPT for research, with the AI falsely assuring him the cases were real, leading the judge to consider sanctions.

Preventing AI hallucinations requires a combination of technical strategies, thorough testing, and ongoing monitoring throughout the development and deployment phases.

How to Navigate

Improve Data Quality

AI hallucinations often arise from poor-quality or biased training data, leading to incorrect outputs. Therefore, companies need to ensure used **datasets are high-quality, diverse, and accurately represent real-world scenarios.** In addition, it's important to regularly update the dataset to include new information and avoid outdated or incomplete data, as well as perform data audits to identify potential biases or gaps that might lead to hallucinations.

Fine-Tune Models

Pre-trained models can hallucinate when asked questions outside their training scope. It's crucial to fine-tune models with domain-specific data, ensuring they have a deeper understanding of the context in which they are deployed. You can also limit the model's ability to generate responses in areas where it lacks expertise or clear data, reducing the likelihood of hallucinations.

Additionally, companies can also fine-tune the "temperature" of your AI solution — an option available with BotsCrew's technology. This setting, adjustable on a scale from 1 to 10, allows you to control the chatbot's response style. A higher temperature encourages creativity and more dynamic replies, though it may occasionally result in format shifts or imaginative hallucinations. On the other hand, lowering the temperature ensures precise, straightforward responses, which is crucial for sectors like Finance and Healthcare where accuracy is key.

Introduce Human-in-the-Loop (HITL) Systems

Unsupervised AI systems are prone to hallucinations, especially in high-risk industries. It might be useful to implement a human-in-the-loop approach, where AI outputs are validated or cross-checked by a human before they are used or deployed, particularly in sensitive contexts like healthcare or finance.

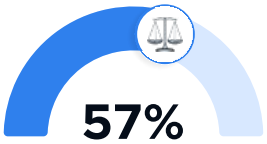
Build Robust Feedback Loops

Models can continue to produce hallucinations if not actively monitored or corrected. You can set up continuous learning feedback loops where user feedback on incorrect AI responses is fed back into the training process. This helps models learn from mistakes, correct inaccuracies, and reduce future hallucinations.

Ensure Ongoing Model Retraining

AI models degrade in accuracy over time, especially as they encounter new data or shifting contexts. To prevent this, companies need to regularly evaluate AI performance using real-world data and adjust or retrain the model to ensure it stays accurate. Keeping models up-to-date with current knowledge is especially crucial in fast-evolving fields like healthcare, law, or finance.

2. Bias and Fairness: The Pitfalls of AI Training and Data Feeding



57% of respondents believe AI tools lead to discrimination and biases.

The uncomfortable truth: AI systems can inherit biases, inequalities, or skewed societal values from the data they are trained on.

At the same time, biased AI can lead to unfair hiring practices, discriminatory lending decisions, unequal customer treatment, PR risks, and even legal consequences.

The rise of AI presents fairness challenges across different sectors including:

Healthcare

AI can misdiagnose patients if trained on biased data.

Finance

Discriminatory lending practices may arise from biased credit scoring models.

Social Services

AI usage in this sector can sometimes cause resource disparities.

Criminal Justice:

AI used in predictive policing or risk assessments can perpetuate racial or socio-economic biases.

Insurance

Biased data could affect risk assessments and policy pricing.

Hiring/Recruitment

Algorithms may favor certain demographics based on historical hiring data.

Real-World Examples:

> In 2018, Amazon scrapped its AI recruiting tool after discovering **it was biased** against female candidates. The AI had been trained on CVs submitted to the company over a 10-year period, which were predominantly male. As a result, the algorithm penalized resumes that included the word "women" or referenced women's colleges.

> Similarly, in the US, the widely-used AI algorithm COMPAS, designed to predict recidivism, was found to exhibit racial bias. An investigation by ProPublica revealed that the system disproportionately flagged black defendants with inaccurate predictions, raising serious concerns about fairness in its assessments.

By addressing bias in AI systems during their development and management, businesses can:

- Reduce risk exposure
- Strengthen their value proposition
- Preserve and enhance their brand reputation
- Stay compliant with upcoming legislation
- Position themselves as competitive leaders in a rapidly evolving industry.

How to Navigate

Understand and Define Fairness

Define fairness for your use case, considering aspects like demographic parity, equal opportunity, and individual fairness. Engage diverse stakeholders, including those affected by AI, to gather different perspectives on what fairness means.

Use Diverse Data Sets

Large language models (LLMs) are often built using vast internet data sources like Reddit and Wikipedia, which lack robust checks for accuracy, fairness, and inclusion. For instance, 67% of Reddit contributors and 84% of Wikipedia editors are male. This imbalance can lead to biased or harmful outputs. Ensure your AI is trained on a wide range of data that reflects all relevant demographics, not just a skewed sample.

Implement Regular Reporting

Document and communicate the fairness measures taken, including how biases were addressed and the metrics used to evaluate fairness.

Introduce Regular Audits

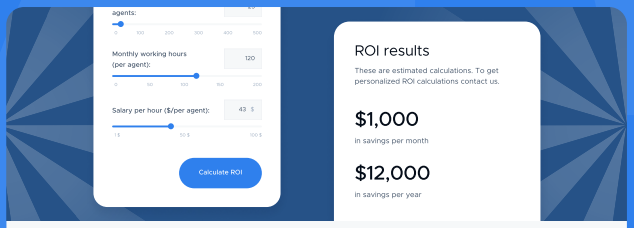
Perform regular checks for biases in AI decision-making processes, particularly in areas like hiring or customer service.

Ensure Legal and Regulatory Compliance

Keep up with legal and regulatory requirements related to AI and fairness in your region or industry. Adhere to established best practices and guidelines for AI fairness and ethics to avoid legal and reputational risks.

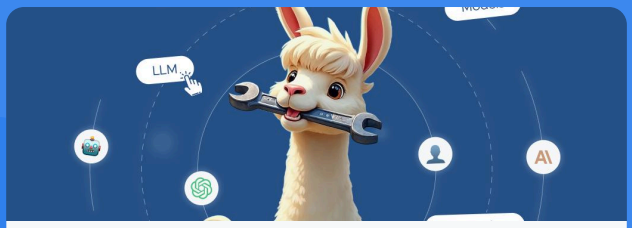
For instance, in the U., 21 AI-related laws were passed, including Alabama's guidelines on facial recognition in criminal cases and Vermont's creation of an AI division to review state use and draft an ethics code.

On the hunt for more insightful resources on AI adoption?



AI Chatbot ROI Calculator — see how much you can save with AI Assistant

Calculate your ROI



How to Train an LLM Using Fine-Tuning? Best Practices for Businesses

Read the article

...or contact us to learn more about chatbot usage for your specific industry! Just reach out to christina.vergelets@botscrew.com with your request for more information.

3. Data Privacy and Security: Safeguarding Highly Sensitive Information Around LLMs

A PwC study found that 68% of consumers are concerned about how companies use AI to collect and manage their data, while **80%** of businesses believe privacy and security concerns are the most significant barriers to AI adoption.

LLMs come with several serious risks. Besides misinformation and harmful bias by deploying negative stereotypes, they can:

- violate privacy by using data without people's consent
- cause security breaches if they are used to generate phishing emails or other cyberattacks.

AI systems rely heavily on sensitive data, especially in sectors like healthcare and finance. Regulations like GDPR and CCPA have increased scrutiny of how this data is handled, processed, and stored. With data breaches making headlines, businesses must take extra care to balance AI-driven innovation with strict privacy and compliance measures.

Sectors like healthcare, finance, legal, and retail are the most commonly targeted when it comes to data breaches, impacting millions of people from all over the globe each year.

Real-World Example:

> In 2013, FMCNA, which runs over 2,200 dialysis clinics, cardiac labs, and urgent care centers, reported five data breaches. An OCR probe revealed that several FMCNA entities neglected to properly assess risks to patient data, including due to AI usage, leading to unauthorized ePHI disclosures. To resolve these HIPAA violations, FMCNA paid a $3.5 million fine.

How to Navigate

Guarantee Compliance with Regulations

Always ensure your AI systems comply with local and international data privacy laws.

Minimize Data Collection

Only collect what you truly need, ensuring each piece of data has a clear purpose.

Remove Unnecessary Details

Don't keep outdated data. Remove identifiers like names and addresses, and consider deleting sensitive details such as payment info, confidential conversations, or medical records based on your organization's needs.

Ensure Data Encryption

Encrypt data in transit and at rest to protect sensitive information from unauthorized access.

Implement Strict Access Controls

Use multi-factor authentication (MFA) and role-based access control (RBAC) to tightly restrict who can view sensitive data. This layered approach helps prevent unauthorized access and minimize breach risks.

Anonymize Data When Needed

Use anonymized or aggregated data where possible to reduce the risks associated with handling sensitive information. How it works: you send pseudo-information to OpenAI for processing and then swap it with real data before showing results to the user. This keeps critical info away from prying eyes.

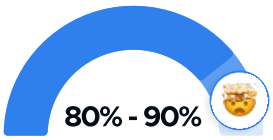
Our story:

We've partnered with a beverage enterprise managing large databases, where employees once relied on data analysts for insights. Now, our GPT-powered chatbot enables on-demand search, analysis, and report generation.

To protect sensitive data, we use GPT-4 API for queries without sharing actual figures, ensuring data isn't used for AI training. Additionally, we apply data anonymization where necessary for extra security.

Be proactive, not reactive — preventative, not remedial.

4. Unstructured Data: Turning Disorder into Valuable Insights

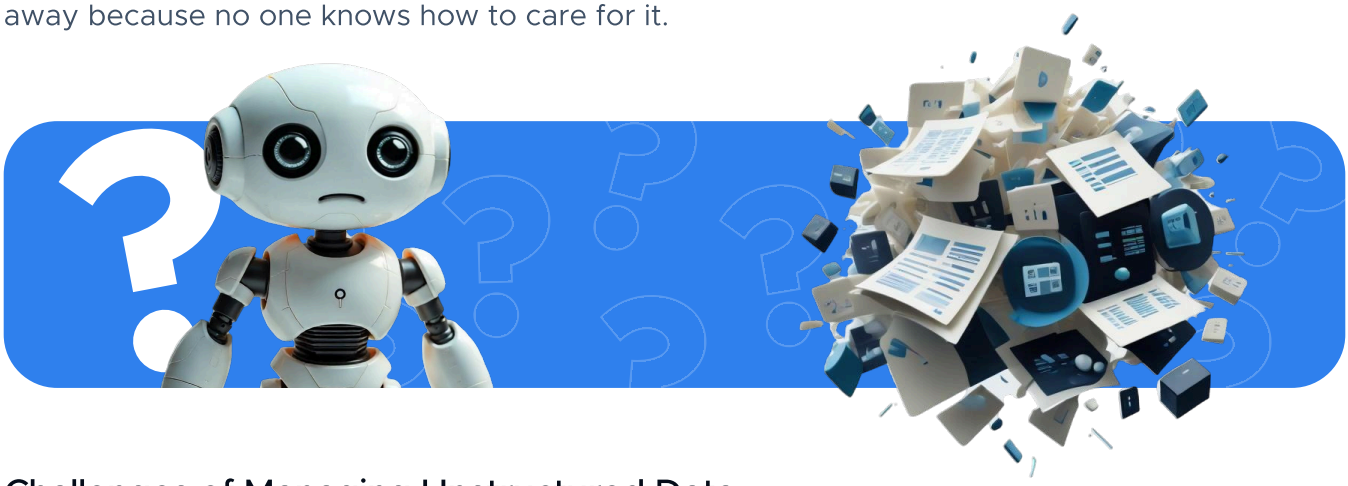


The global data sphere is expanding at a crazy rate. However, estimations say that from 80% to 90% of the data out there is unstructured.

Unstructured data refers to any information that doesn't fit into traditional databases or spreadsheets. Examples include emails, social media posts, videos, audio files, and documents. Unlike structured data, it lacks a defined format, making it harder to analyze.

Structured Data	Unstructured Data
Organized in a fixed format or schema	Not organized in a predefined structure
Stored in databases and spreadsheets	Found in text documents, images, videos, etc
Can be easily queried and analyzed	Requires advanced techniques for analysis
Examples include customer details in CRM	Examples include social media posts, emails
Fits well into traditional data models	Doesn't fit well in traditional models
Easy to process, manipulate, and visualize	Often requires natural language processing
Well-suited for numerical calculations	Contains valuable data but is unformatted
Typically generated by structured systems	Generated by humans and digital interactions

Unstructured data ***is*** the thing nobody wants to deal with. However, it is something we actually ***should*** deal with. Many organizations let their unstructured data gather dust, unsure how to harness its potential or even where to begin (although it can be a source of valuable insights, especially since most of the world's data is unstructured). It's like watching a garden wither away because no one knows how to care for it.



Challenges of Managing Unstructured Data

Managing unstructured data brings several challenges such as:

Disorganization

Unstructured data is hard to categorize, making traditional methods ineffective. Finding specific information in this vast, messy web is like searching for a needle in a haystack.

Integration Hurdles

Unstructured data often coexists with structured data, making integration a complex task. Proper planning and data mapping are essential for seamless alignment and a unified view.

Data Cleansing

A significant portion of data scientists' time — about 60% — is spent on cleaning unstructured data riddled with errors and inconsistencies. This process is time-consuming and critical for maintaining data quality.

...and more!

How to Navigate

Text Normalization

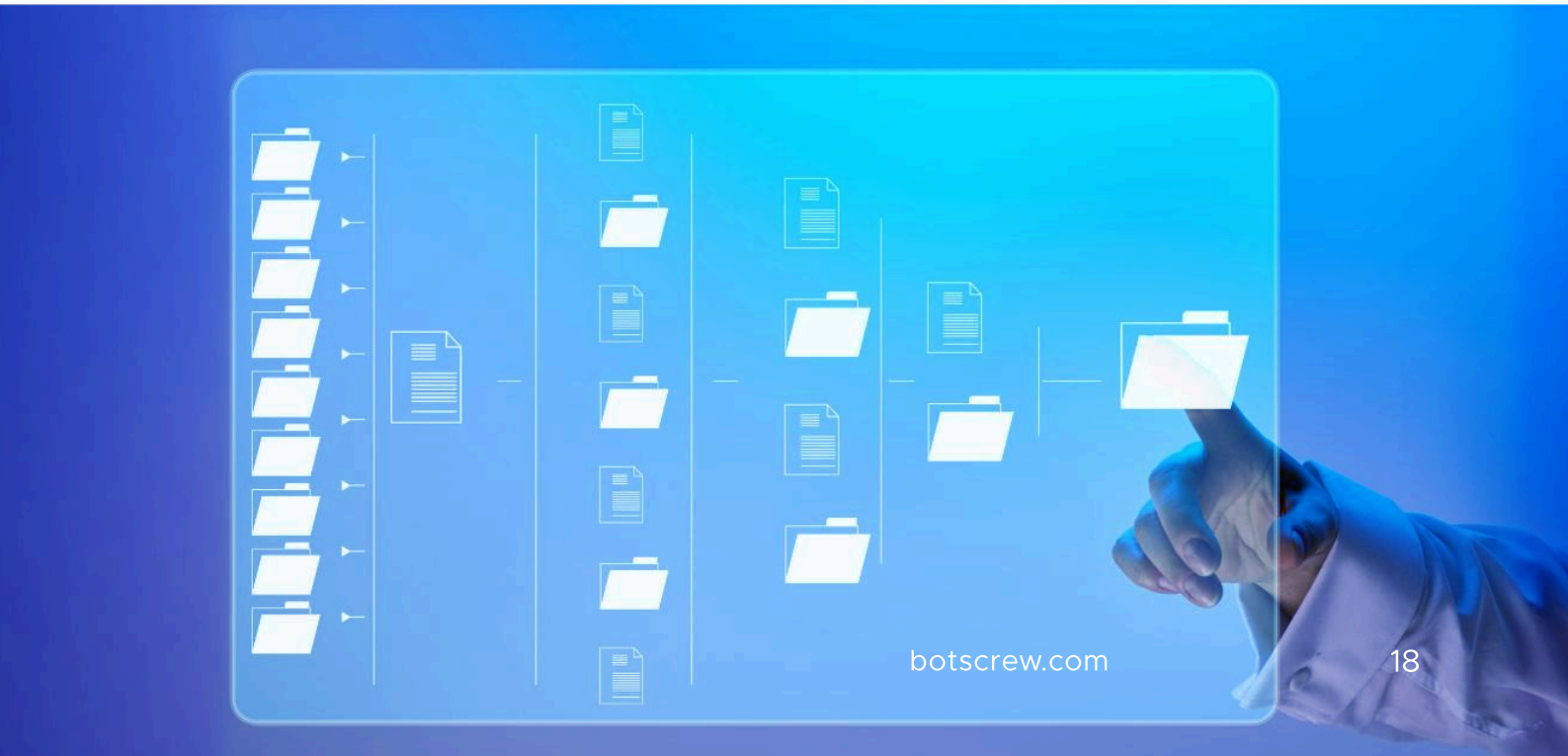
In the case of textual data, normalization involves converting text into a consistent format. This might include tasks like lowercasing, stemming, and lemmatization to reduce words to their base forms.

Noise Removal

Eliminating irrelevant or extraneous information, such as removing special characters or irrelevant metadata from images and videos.

Data Segmentation

Breaking down large volumes of data into manageable chunks. For example, segmenting a long video into scenes or frames for analysis.



Our story:

We've partnered with the world's largest luxury fabrics and furnishings provider, employing nearly 1,000 people globally, to streamline knowledge retrieval and optimize internal processes using AI.

*Their data included **unreadable formats, outdated content,** and thousands of product pages with unique specs.*

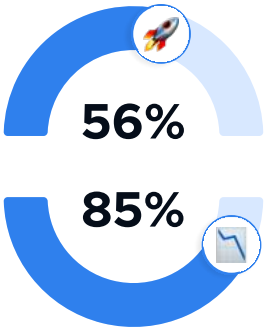
To tackle this unstructured data challenge, we applied key strategies:

- Expanded the number of sources in Retrieval Augmented Generation.
- Shifted to a GPT model with a larger 128k token window.
- Cleansed outdated files and sources.
- Fine-tuned the model's temperature to balance creativity and accuracy.

Additionally, we grouped internal AI assistant's functions according to the types of potential user queries. This approach allowed us to tailor more effective strategies for ensuring accurate answers to each category of questions. These efforts together boosted AI accuracy **from 60%** to **nearly 90%.**

For other (certain) clients, we implemented a **hybrid approach** by combining our platform's core functionality with custom code and integrating additional services to enhance the parsing of complex or poorly readable files. One example involved PDF documents with numerous images, where standard parsing wasn't meeting expectations. This way, we significantly improved the parsing accuracy and efficiency, delivering a far better outcome for the project.

5. Lack of In-House Expertise & Challenges in Finding the Right AI Partner: Navigating the Uncertainty



6 in 10 businesses face difficulties in identifying a trusted partner for AI development. Moreover, **over half of companies (56%)** feel their internal teams lack the necessary skills to manage and implement AI successfully, making a reliable partner essential for success. At the same time, Gartner reports that up to 85% of AI projects don't deliver on their intended business goals, largely due to poor implementation or choosing the wrong vendor.

Successfully adopting AI requires specialized knowledge to deploy, maintain, and improve these solutions. Businesses without in-house AI expertise worry about the complexities of implementation, ongoing management, and training needs. That's why having a reliable partner is crucial:

Tailored Solutions

A reliable partner customizes AI to your business needs, avoiding generic solutions that do not fit your processes.

Expertise and Support

With AI being complex and fast-evolving, a good external partner brings the latest know-how and ongoing support to ensure smooth integration and scalability.

Risk Mitigation

Without the right partner, businesses risk misconfigurations, data security issues, and failed implementations, which can lead to wasted time, money, and resources.

Faster Time-to-Market

An experienced AI developer helps you get your project off the ground quicker, ensuring that you are not left behind as competitors leverage advanced technologies.

We've been partnering with industry leaders like Samsung NEXT, Honda, Mars, Coca-Cola, KIA, FIBA, the International Committee of the Red Cross (ICRC), Adidas, and others for nearly 8 years, helping them to build Conversational & Generative AI. With BotsCrew, there is no need to be a well-versed AI expert. Leverage the knowledge of our teams!

BotsCrew + SAMSUNG NEXT HONDA MARS FIBA adidas ICRC KIA

Additionally, you are not alone in this journey! Our dedicated team and prioritized support at all stages come in a package along with cutting-edge technology while collaborating with us.

46% of AI initiatives fail to make it from pilot to production.

With BotsCrew, businesses are enjoying a **significant productivity, efficiency, and revenue boost** through AI-powered assistants with unwavering support at every step and zero risk of failure.

Start your seamless automation journey today.

Get a free pilot of the custom Internal AI with BotsCrew