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Making Sense of AI Technology in Revenue Cycle Management

Making Sense of AI in RCM

- Introduction
 - AI Technology, Digital Transformation & What it Means for RCM
- Scope of AI Technology
 - Internal Use
 - Regulatory Concerns & Considerations
 - Patient & Payor Uses
- Practical Uses for AI RCM
 - Generative AI
 - Robotic Process Automation
 - Conversational AI
- Safeguards for AI Technology
- Best Practices of AI Technology Today



AI & WHAT IT MEANS FOR RCM

- We are living in the Decade of AI
- AI is everywhere – in the news, on social media, and in most healthcare marketing solicitations.
- 9 out of 10 of RCM leaders reported in a 2020 survey that they are utilizing or looking to utilize AI.
- 46% of Employees reported using ChatGPT at work and not telling their employers
- There are no clear universal definitions of AI, and the term is used broadly and widely. Not all “AI” is true “Artificial Intelligence”

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AI

AI & WHAT IT MEANS FOR RCM

- Many AI technologies have been around in healthcare and RCM for the past 5 years.
- Many AI technology concepts of Data Aggregation, (including the Collection, Tracking, Analysis, and Monetization) have also been prevalent in RCM for the past 5 years
- Many providers have already spent and been burned by “promises” of AI
- Most RCM leaders indicate a hesitancy to use AI because of
 - Costs
 - Unsure about how to implement and use
 - Unsure about privacy/safety

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AI

- The AI arms race is here
- With ChatGPT, Google, Microsoft, Amazon etc., you can now use AI based processes in your business office without a big spend
- Remember the principle: if something is free or cheap, you are the product
- Free GPTs are widely used, but have risks & limitations on how they can be used in RCM. The two largest concerns are:
 - Data Security & Privacy
 - Harmful & Incorrect Outputs
- Free GPTs & LLMs available are Version 1.0. Version 2.0 will be enterprise level GPTs with privacy protections



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- 2023 saw a rapid increase in adoption of Generative AI, Robotic Process Automation, and Conversational AI because these technologies are now affordable, easily adoptable, and can save hours of time and make employees more efficient.
- These technologies are collecting more data than ever.
- 5 Year Vision
 - Your employees will be coworking with AI bots & chatbots
 - Your patient and payor interactions will be mostly through chatbots, digital twins, and avatars

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AI



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AI & WHAT IT MEANS FOR RCM

- The need is here for RCM departments to learn and embrace certain AI technology, if not for gain, but pain – as a defensive measure.
- It is not a matter of if you will adopt this technology, but when
- Even if you don't “adopt” new AI technology, you will encounter it with:
 - Your Employees
 - Your Vendors
 - State & Government Regulators
 - Patients
 - Payors

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AI, DIGITAL TRANSFORMATION & WHAT IT MEANS FOR RCM

- Top Take Aways:
- Create an AI policy for your department. Without one, your employees and vendors could be using AI without your knowledge.
- Create an AI committee for how your department will use and interact with AI technology including:
 - Data Collection & Monetization
 - Generative AI
 - Robotic Process Automation
 - Conversational AI

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AI

OpenAI Quietly Releases Web Crawler; ChatGPT Flounders, Bard Flourishes in Latest Usage Data

By Stephanie Palazzolo | Aug. 8, 2023 7:30 AM PDT
Photo: Chart by Shane Burke.

One of the biggest complaints that **ChatGPT** users have is the lack of up-to-date information from the web in its models and chatbot. **OpenAI's** announcement on Monday night of **GPTBot**, a web crawler that scrapes sites for data that may be used to improve its future models, could be the company's answer.

It might not be a coincidence that the announcement follows recent news that the number of people using ChatGPT on the web has declined in the past two months. Data from **Similarweb** released late last week, which went unnoticed by most major publications, showed the number of monthly visits to ChatGPT had dropped 9.6% to 1.5 billion in July from 1.6 billion in June, which was in turn down from 1.8 billion in May.

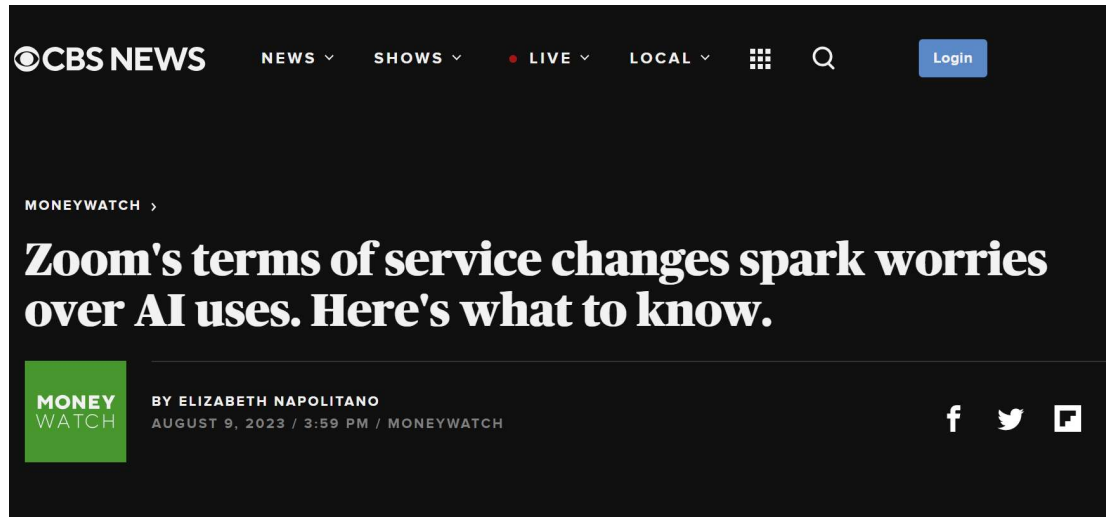
How ChatGPT's New Web Crawlers Work

ChatGPT's next version is based on a deep learning model called GPT-5, which is trained on a massive amount of text data from the internet. The more data it has, the better it can perform. To expand its dataset and improve its capabilities, OpenAI has recently released a new web crawling bot, called GPTBot, that can collect and process data from the web.

GPTBot is designed to crawl the open web and extract relevant and high-quality text content for ChatGPT. It uses various criteria and filters to select the websites and pages it visits, such as domain authority, language, topic, freshness, etc. It also respects the robots.txt protocol, which allows website owners to specify which parts of their site can or cannot be accessed by web crawlers.

Once GPTBot finds a suitable web page, it parses the HTML code and extracts the text content. It then applies some preprocessing techniques, such as removing ads, menus, footers, and other irrelevant or redundant elements. It also performs some natural language processing tasks, such as tokenization, normalization, segmentation, etc., to make the text more suitable for ChatGPT's input format.

After preprocessing the text, GPTBot sends it to ChatGPT's server, where it is stored and indexed for future use. ChatGPT can then access this data whenever it needs to generate a response or a conversation. The data is also used to fine-tune ChatGPT's model periodically, to make it more accurate and up-to-date.



When Zoom announced an update to its terms of service earlier this week that appeared to provide access to users' data for AI training, privacy advocates and customers rang the alarm.

"Zoom's [terms of service] now demand that they use AI to train on audio, face and facial movements, even private conversations without recourse, unconditionally and irrevocably," scientist Bryan Jones [said](#) in a tweet, "Opting out is not an option."

The backlash prompted Zoom to clarify its service terms in a [blog](#) post on Monday, in which it promised not to "use audio, video, or chat content for training our models without customer consent."

However, privacy experts warn that while that promise is now codified in Zoom's user agreement, it doesn't prevent the company from using customer data to train AI. As a result, many users are confused about how much of their data is being used and how to protect their privacy during digital meet-ups.

Zoom did not immediately respond to a request for comment.

However, if a meeting host agrees to share data with Zoom, everybody participating in the meeting must share their data during that call.

This means participants who want their information to remain private must leave the Zoom call if their host consented to data-sharing. To be sure, this could be a problem for workers whose employers require them to attend Zoom sessions.

"If the administrator consents and it's your boss at your work who requires you to use Zoom, how is that really consent?" Katharine Trendacosta, director of policy and advocacy at the Electronic Frontier Foundation, told the Associated Press.

What kind of data can Zoom collect?

There are two types of data Zoom can collect: "service-generated data" such as user locations and the features customers use to interact with the service, and "customer content," or the data created by users themselves, such as audio or chat transcripts.

TECH · A.I.

Microsoft is adding an A.I. Copilot to its office software that can summarize long emails and draft stories

BY HALELUYA HADERO AND THE ASSOCIATED PRESS
March 17, 2023 at 5:59 AM CDT



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FOR NEW & EXISTING
CUSTOMERS

SAMSUNG Galaxy Z Flip5

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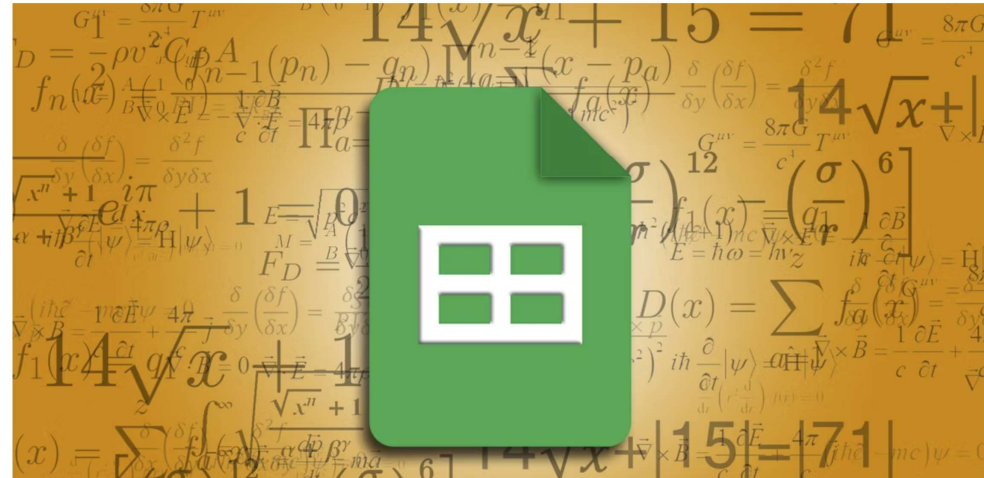
BlackRock expects economy to flatline for a year before inflation returns in 2024. Get ready for a generational ...



Google Sheets starts rolling out time-saving AI magic into spreadsheets

— Sheets can now generate generic templates based on your prompts

BY JAY BONGGOLTO PUBLISHED JUN 23, 2023



03-18-24 | 8:10 AM

Apple may use Google Gemini or ChatGPT to power the iPhone's AI features: report

A generative AI deal between Apple and another tech giant would be significant for a number of reasons.



[Photo: BlackSalmon/iStock/Getty Images]

Apple has held talks with both OpenAI and Google to use their chatbot technology to power some of iOS 18's upcoming artificial intelligence features, according to a [report](#) from *Bloomberg*. If a deal goes through, Apple could use ChatGPT or Gemini for cloud-based AI features as part of the next operating system for the iPhone.

The reported discussions between Apple, Google, and OpenAI are notable for a few reasons. First, it suggests that Apple is further behind than thought in some of its AI endeavors. The company was [the only tech giant](#) that didn't go all-in on AI in 2023 after ChatGPT took the world by storm the year before. Since then, Apple has been scrambling to catch up with its competitors. But if the company is looking to secure licensing deals with Google or OpenAI to use one of their chatbots, it clearly does not think its own chatbot can compete at this time.

Another thing that makes these discussions notable, when it comes to Apple and Google, is that if Apple were to license the search giant's Gemini chatbot, such a deal would likely amount to the most important collaboration between the two companies since Apple and Google entered into an agreement nearly 15 years ago to have Google's search engine be the default search engine on the iPhone. Google now reportedly now pays Apple \$20 billion a year for that deal — one that is the [center of an ongoing antitrust lawsuit](#) against Google by the U.S. Department of Justice.

We've reached out to Apple, Google, and OpenAI for comment and will update this post if we hear back.



MAN USES AI TO TALK TO 5,000 WOMEN ON TINDER, FINDS WIFE

"AT SOME POINT, THE PROJECT WROTE ME A RECOMMENDATION THAT MAYBE IT'S TIME TO PROPOSE TO KARINA."

— GETTY / FUTURISM

AI Day Fiancé

Instead of going through the tedious process of actually interacting with women, Moscow resident Aleksandr Zhadan programmed OpenAI's GPT large language models to talk to well over 5,000 women on his behalf.

Zhadan went as far as to have it schedule IRL dates with matches and filter out profiles that showed women posing with alcohol, as [Gizmodo reports](#).

Lo and behold, his efforts appear to have paid off: Zhadan found his wife, Karina Vyalshakaeva, in apparent proof that his bizarre and extremely 2024 method of finding love in the age of AI can actually work — if the

Scope AI in RCM

The Three Lenses of Which to View AI Technology:

1. Internal Use

- Provider Use
- Vendor Use (Intentional & Unintentional)

2. Government Regulations

- Federal Laws & Regulations on AI
- State Laws Governing AI
- Regulatory Generative AI Oversight

3. Patient & Payor Uses

- Consumer ChatBots
- Payor ChatBots
- Digital Twins

Industry Applications of AI in RCM

- Data Aggregation (Collection & Monetization)
 - Data Aggregation is the combining of PHI (by Business Associate or Covered Entity) to permit data analyses that relate to the health care operations of the respective covered entities
 - Providers capturing patient behavioral data for internal uses including maximizing communications and propensity to pay
 - Providers purchasing patient behavioral data for internal uses including maximizing propensity to pay
 - Providers selling internal patient performance data to sell to third parties
 - Third parties capturing & selling internal provider data and using externally with or without the entity's knowledge

Industry Applications of AI in RCM

- Use Cases in RCM(Collection & Monetization)
 - Patient Engagement
 - Payor Engagement
 - Intelligent Reporting
- Data Collection of the Future: Neurotechnology/Neurorights
 - Electroencephalogram (EEG)
 - Electromyography (EMG)
 - Wearable Tech
 - Mobile Health Apps

Industry Applications of AI in RCM

- **Generative AI**
 - **Compliance & Operations**
 - Policies, Procedures, Controls, Reporting
 - Training Materials
 - **Business Analysis Roles**
 - Ideation & Analysis on new technology & initiatives
 - **Patient Communications**
 - **Payor Communications**
 - **IT Reporting**
 - **Internal Department Chat Bots**
 - Client Requirements & Work Standards
 - HR Reference Chat Bot
 - IT Reference Chat Bot
 - Compliance Reference Chat Bot
 - Vendor Compliance Chat Bot

Industry Applications of AI in RCM

Robotic Process Automation

- Look for Tasks with Routine & Repetitive Workflows, and that require sifting through large data sets
 - Data Interface
 - EDI
 - Document Processing
 - Report Building
 - Charge Capture
 - Coding
 - Payment Processing
 - Claims Lifecycle (Prior Authorization, Processing)
 - Denials
 - Insurance Follow up
 - Quality Control

Industry Applications of AI in RCM

Conversational AI

- Inbound conversational chat bots with patients
- Outbound conversational chat bots with patients
- Rule Based Conversational AI
- Generative Based Conversational AI



Safeguards of AI Technology

- **Be Mindful of Data Privacy & Security Requirements to protect patient data**
 - Prohibition on AI that does not protect patient data and provide a right to delete
- **Be Mindful of Harmful Outputs that could affect patients or the public**
 - Outputs can be wrong
 - Outputs may lead to decisions that have negative affects on patients & public
- **Transparency**
 - **Clear Definitions & Distinctions for Technology Being Used**
 - Rules based Generative AI v. Blackbox based Generative AI
 - Open sourced Generative AI v. Enterprise Generative AI
 - Patient Solicited Conversational AI v. Unsolicited Patient Conversational AI
 - Data Aggregation & Behavior Tracking vs. Surveillance Capitalism/Dark Patterns
 - Look for requirements to be transparent and keep records of prompts

Patient Privacy in Use of AI Technology

Privacy Considerations

- **Current Considerations**
 - HIPAA
 - HITECH
 - GLBA
 - State Privacy Laws
 - NeuroRights
- **Future Privacy Rights & Regulations for Patients**
 - Right to be Left Alone, Not Tracked, Used as Input or Output
 - Name, Image, Likeness Rights like HIPAA
 - Who owns copyright of input?
 - Who owns copyright of output?
 - Future Questions to Consider
 - HIPAA Rights for Patient Chatbots?
 - HIPAA Rights for Digital Twins?

Regulation of AI Technology

Potential Regulatory Considerations

- **Federal Laws**
 - HIPAA Privacy Rule & Security Rule
 - HITECH Act
 - 21st Century Cures Act
 - GLBA
- **Regulatory Authorities**
 - OCR
 - Bulletin published that announced they are heavily scrutinizing Health Care Websites with Tracking Technology that sell data to third parties
 - Look for future HIPAA rules to cover Data Aggregation
 - FTC & CFPB have both published guidance hinting about use of AI technology in regards to harmful outcomes and data privacy
- **20 States with Proposed AI Legislation**

Regulation of AI Technology

- State Laws
- Louisiana SCR 49:
 - Defines AI “combines computer science and robust datasets to enable problem-solving measures directly to consumers.”
 - Created Joint Committee on Technology & Cybersecurity to study the impact of AI
- Proposed Legislation
- Makes distribution of synthetic media (including video, voice recordings) generated by algorithms that appear to be a record of actual events) in the public without labeling it as such face criminal penalties

Potential Regulation of AI

- Liability for entities that produce harmful content
- Liability for AI Systems that allow for production of harmful content
- Potential Consumer Privacy Regulations of AI
 - CFPB & FTC Joint Statements
 - Concerns: Fraud, Bias, Black Box Algorithms, Self Coding Algorithms, Technical Limitations & Security Risks, Keeping Consumer Data Safe
 - EU AI Act
 - High Risk AI systems are regulated, including those that could harm people's health, safety, fundamental rights, or environment
 - Companies must be transparent about how AI systems work & must conduct risk assessments before deploying them
 - Individuals have right to challenge decisions made by AI
 - Ban on real time biometric identification systems & social scoring systems

Patient & Payor use of AI

- Patient Uses
 - Digital Twins
 - Patient Chat Bots
- Payor Uses
 - Payor Chatbots
- Virus Agents & Uses – Bad/Frustrated Actors Who Will Use AI Against Your Systems
 - Stop Bothering Me
 - Avoid Paying Bills
 - Disputes
 - Generating AI Content That Documents They Did Not Receive Services
 - Baiting
 - Phishing
 - Ransomware

Best Practices in Adopting AI

- Embrace AI that can bring efficiencies and ROI
- Create AI Policy
- Create AI Committee
- Anticipate Proactive & Reactive Uses
- Risk Assessment on AI Technology
 - Categorize the type of “AI” Technology & Its Use
 - Categorize the data being used and generated
 - Categorize the costs & benefits to the patient
 - Compliance Assessment
 - Is this technology compliant with all current state and federal laws?
 - Is the technology compliant with regulatory guidance on uses?
 - Is there potential that this technology could be regulated in the future? If so, how?
 - Does the technology incorporate any legal but surveillance capitalism elements?
 - Does the technology incorporate any dark patterns?
 - Is the technology transparent and able to be explained?

Use Case – ChatGPT & GPTs

- Generative AI to help create compliance content efficiencies
 - Content Curation v. Content Creation
- Designated Use – Internal use only, no patient communications
 - Use Forward Thinking Employees
- Designate Prohibitions – No PHI, confidential or proprietary information
- Designate Employees & Vendors Who Can Use
- Test GPTs in your facility to identify how you can save time, money, & resources & be ready for vendors selling technology
- Identify Uses:
 - Every Department & Responsibility has content that needs to get done that is not done
 - Identify Projects/Assignments that:
 1. are difficult to start,
 2. that fall out of employee's conscious competence,
 3. and that are important but not urgent
- Those are tasks & content that get put off

Practical Compliance of AI

- Create AI Policy & Committee to govern all aspects
- Compliance with Generative AI
 - Treat ChatGPT & Open-Sourced AI as Social Media
 - Do Not Share Consumer Data, Confidential, or Proprietary Information with OpenSourced AI
 - Designate which if any Vendors can use ChatGPT based technology
 - Get Indemnification Clause from Vendors who Use
 - Designate Employees To Use ChatGPT & Train on Safeguards
- Compliance with RPA
 - Preference for Attended RPA v. Unattended RPA
 - Use Attended RPA for Patient facing tasks, Unattended for Backend tasks
 - Map use for all RPA v. AI Generative RPA
- Compliance with Voice AI Agents
 - Start with Inbound Calls – Outbound calls still have TCPA & consent considerations
 - Map use for Voice AI v. Generative AI

Use Cases of Generative AI & RPA for RCM

- GPTs
 - HIPAA Compliance Bot
 - BAA Bot
- Microsoft Teams & CoPilot – Build your own LLMS
- RPA
 - UI Path Community Edition
 - Build External RPAs for repetitive tasks

Questions



Morgan Financial Group is a family owned business that has 75 years of experience providing first and third party revenue cycle solutions to providers in Oklahoma and Texas.

Extended Business Office

Insurance Denials & Follow Up

MVA Hospital Liens

Early Out & Self Pay

Bad Debt Collections

Legal Collection Services

Compliance Solutions

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