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### **Contents**

### Proem

No surprise, I use Artificial Intelligence in my podcast production. As an early adopter of technology, I explore ways of using Artificial Intelligence (AI) tools during my podcast production. As a technology skeptic, I'm alert to ethics, dangers, and risks. I'm uncomfortable with the term Artificial Intelligence. It's not artificial or intelligent. Wait, I heard that somewhere? Where? I asked Perplexity, my most common AI tool. Someone said that AI is neither artificial nor intelligent. What was really said?

[Side note: I converse with AI, ask questions, pose another question, and clarify, just like talking with my grandkids about Pokémon, video games, or politics. Also, note that in AI-speak, questions are called **prompts,** and answers are referred to as **output** or **answers.**]

## Perplexity answered:

The statement "AI is neither artificial nor intelligent" was made by Kate Crawford, a prominent researcher and author in AI ethics and policy. Here's a breakdown of what she really said and meant:

- 1. **Not Artificial**: Crawford argues that AI is not truly artificial because it is "made from natural resources, fuel, human labor, infrastructures, logistics, histories, and classifications" <a href="https://conversational-leadership.net/quotation/ai-is-neither-artificial-not-intelligent/">https://conversational-leadership.net/quotation/ai-is-neither-artificial-not-intelligent/</a>
  - She emphasizes that AI systems are grounded in the physical world and rely on very real and tangible resources and human input.
- Not Intelligent: Crawford contends that AI systems are "not autonomous, rational, or able to discern anything without extensive, computationally intensive training with large datasets or predefined rules and rewards." This challenges the notion of AI as an independent, thinking entity.
- 3. **Embodied and Material**: Instead of being artificial or intelligent in the way we often imagine, Crawford describes AI as "both embodied and material."

[A brief aside: The AI tool, <u>Grammarly</u>, doesn't know when something is a direct quote, so it suggests edits. I trash those suggestions. This showcases human control of AI in its simplest form. Grammarly's plagiarism check function appropriately noted when I quoted myself and quoted others in Perplexity.]

In the interest of transparency, this episode shares my thoughts on and use of AI in podcast production.

# Al used in Health Hats Production

A partial list of software and apps that include AI functions I use in production includes <u>Zoom</u>, <u>Descript</u>, Grammarly, <u>DaVinci Resolve</u>, <u>Canva</u>, Perplexity, <u>OpenArt AI</u>, <u>Squadcast</u>, <u>Audacity</u>, <u>DALL.E</u>, <u>Auphonic</u>, <u>and more</u>.



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# Al in Podcast Production According to Health Hats

What does artificial intelligence even mean? I need to break down the tool to better understand it. Al can involve functions like searching, content creation, editing, or summarizing. Sophistication or capabilities could refer to a level of understanding, such as completing specific tasks, acting as a virtual assistant, solving problems, discerning patterns, or learning beyond itself. We could also consider Al in terms of ownership, agency, business models, or trust. Yikes, that's as far as I can go.

So, I prompted Perplexity: I'm trying to tell my followers how I use AI in podcast and video production. How should I categorize types of AI?

With references, Perplexity answered:

When discussing how you use AI in podcast and video production, it's helpful to categorize the types of AI tools based on their primary functions. Here's a suggested framework for categorizing AI tools in media production:

# AI in Content Creation and Editing

## **Audio Processing**

Al tools in this category can significantly enhance the quality and efficiency of your podcast production:

- Noise Reduction: Al algorithms can automatically remove background noise, improving audio clarity. <u>1</u>
- Voice Enhancement: Tools like Adobe Podcast can enhance voice quality, making recordings sound more professional. 2
- Automated Editing: AI can identify and remove filler words, pauses, and other unwanted audio elements. 4

### Video Editing

For video podcasts or related content, AI can streamline the editing process:

- Automated Cuts: AI can suggest or implement edits based on content and pacing. 2
- Visual Effects: AI-driven tools can apply effects or adjust visual elements like lighting and color balance.
- Content Summarization: AI can generate highlight reels or short clips for social media promotion.

# AI for Content Enhancement

# Transcription and Subtitling

These tools improve accessibility and repurposing of your content:

Automated Transcription: AI can quickly convert audio to text, saving hours of manual work.



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Multi-language Subtitles: AI-powered translation can help reach a global audience. 4

### Content Generation

Al can assist in various aspects of content creation:

- Script Writing: AI tools can help generate ideas, outlines, or even full scripts for episodes. 1
- Show Notes: Automatically generate detailed show notes from your audio or transcript.
- SEO Optimization: AI can suggest keywords and optimize content for better discoverability. 4

# Al for Audience Engagement and Analytics

### Personalization

Enhance listener experience with AI-driven personalization:

- Content Recommendations: AI can suggest relevant episodes to listeners based on their preferences. 6
- Dynamic Ad Insertion: Personalized ad placement based on listener data and content context. 4

# **Analytics and Insights**

Leverage AI to understand and grow your audience:

- Audience Analysis: AI can provide insights into listener behavior and preferences.
- Performance Prediction: Some tools can predict the potential success of content before publication. 6

By categorizing AI tools in this way, you can clearly communicate to your followers how AI enhances different aspects of your podcast and video production process, from content creation and editing to audience engagement and analytics.

I haven't used this function yet.

## Types of AI Based on Capabilities

Then I prompted Perplexity again:

Al is such a general term. What are the various types of AI? How do they differ?

Artificial Intelligence (AI) can indeed be categorized in various ways. Here's an overview of the main types of AI based on their capabilities and functionalities:

### Narrow AI (Weak AI)

Narrow AI is designed to perform specific tasks within a limited context.  $\underline{1}$   $\underline{2}$ 

It's the most common type of AI currently in use. Examples include:

• Virtual assistants like Siri or Alexa



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- Image recognition software
- Recommendation engines (e.g., Netflix, Amazon)

While highly efficient at specific tasks, Narrow AI lacks the ability to function beyond its predefined scope.  $\underline{3}$ 

## Artificial General Intelligence (AGI)

AGI, also known as Strong AI, refers to AI systems that would theoretically equal or exceed human intelligence.  $\underline{1}$   $\underline{2}$ 

AGI would be capable of:

- Learning and reasoning like humans
- Solving problems across various domains
- Adapting to new situations

AGI remains a theoretical concept and has not yet been achieved. 3

# Artificial Superintelligence (ASI)

ASI is a hypothetical form of AI that would surpass human intelligence and capabilities.  $\underline{1}$   $\underline{2}$ 

It's purely theoretical and would potentially:

- Exceed human cognitive abilities
- Possess self-awareness and consciousness

# Types of AI Based on Functionality

Reactive Machine Al

This is the most basic form of AI  $\frac{1}{2}$   $\frac{2}{4}$ 

### Reactive machines:

- Respond to immediate inputs without storing memories
- Cannot learn from past experiences
- Are designed for specific, limited tasks

Examples include IBM's Deep Blue chess computer.

### Limited Memory Al

Limited Memory AI can use past data to inform future decisions.  $\underline{1} \underline{2} \underline{4}$ 

It:

Stores data temporarily



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- Learns from recent past for future actions
- Is used in applications like self-driving cars

# Theory of Mind Al

This type of AI, still theoretical, would be able to understand and respond to human emotions and mental states  $\frac{1}{2}$   $\frac{2}{4}$ 

## It aims to:

- Recognize and interpret human emotions
- Adapt responses based on emotional context

### Self-Aware Al

The most advanced theoretical type of AI, self-aware AI would possess consciousness and self-awareness.  $\underline{1} \ \underline{2} \ \underline{4}$ 

This remains purely speculative and has not been developed.

By understanding these categories, we can better appreciate the current state of AI technology and its potential future developments. Each type of AI has its own strengths, limitations, and potential applications across various industries.

### AI Ethical Considerations

Talk of AI is everywhere as a bright, shiny, new thing that could solve any of humanity's problems or the devil incarnate invasion of space and freedom. So, once again, I prompted Perplexity:

What are the ethical considerations when using AI in podcasting?

When using AI in podcasting, there are several important ethical considerations to keep in mind:

### Transparency and Disclosure

One of the key ethical issues is transparency about AI usage. Platforms like YouTube and Apple Podcasts now require podcasters to disclose when AI is used in content creation.  $\underline{1}$ 

It's important to be upfront with your audience about how and where AI tools are being utilized in your podcast production process.

# Maintaining Authenticity

While AI can enhance efficiency, there are concerns about preserving the authentic voice and creativity of human podcasters. The ethical use of AI involves leveraging it to enhance existing content or generate ideas, rather than relying on it to create original content wholesale.  $\underline{1}$ 

Treat AI as a tool to augment human creativity, not replace it.



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### Content Accuracy and Misinformation

Al-generated content raises concerns about the potential for spreading misinformation or inaccurate information. Podcasters have an ethical responsibility to carefully review and fact-check any Algenerated content before publishing. 3

This helps maintain the integrity and trustworthiness of the podcast.

### Bias and Fairness

Al algorithms can perpetuate biases present in their training data. When using Al for content recommendations or moderation, it's crucial to be aware of potential algorithmic biases that could lead to unfair or discriminatory practices. 5

Regular auditing of AI systems for bias is an important ethical consideration.

## Privacy and Data Protection

The use of AI often involves collecting and processing user data for personalization and analytics. Podcasters must be transparent about data collection practices and ensure they are complying with relevant privacy regulations to protect listener information. 5

## Job Displacement Concerns

There are ethical considerations around the potential for AI to displace human jobs in the podcasting industry. While AI can enhance productivity, it's important to consider the impact on traditional roles and find ways to integrate AI that complement rather than replace human creativity and expertise. 5

By addressing these ethical considerations, podcasters can harness the benefits of AI while maintaining integrity, authenticity, and trust with their audience. The key is to use AI responsibly as a tool to enhance the podcasting experience, not as a replacement for human creativity and judgment.

### Climate and Resource Impact

Note that Al's output didn't include any environmental impact.

## Transparency

How can podcasters ensure transparency when using AI in their content?

Podcasters can ensure transparency when using AI in their content by following these key practices:

### Disclosure Requirements

Major platforms now mandate disclosure of AI usage in podcast content. Apple Podcasts and YouTube require creators to prominently disclose when AI is used to generate a material portion of content or create realistic synthetic media. <u>1 2</u>

This disclosure should be made both in the audio and metadata (e.g. podcast description) for each episode or show.



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### Clear Communication

Podcasters should be upfront with their audience about how and where AI tools are being utilized in their production process. This transparency helps maintain trust and credibility with listeners. Some ways to communicate AI usage include:

- Mentioning AI use in the podcast intro or outro
- Adding a note in the episode description
- Discussing AI tools used on social media or in newsletters

# Appropriate AI Usage

The ethical use of AI in podcasting involves leveraging it to enhance existing content or generate ideas, rather than relying on it to create original content wholesale.  $\underline{6}$ 

### Podcasters should:

- Use AI as a tool to augment human creativity, not replace it
- Treat AI like an intern, always overseeing and checking the content it generates before using it
- Maintain their own voice and expertise while making use of AI tools

### **Content Verification**

To maintain integrity and prevent the spread of misinformation, podcasters have a responsibility to:

- Carefully review and fact-check any AI-generated content before publishing
- Ensure AI is not used to mislead or deceptively portray real-life events. 1
- Be vigilant about potential biases in AI-generated content

## Ongoing Evaluation

As AI technology evolves rapidly, podcasters should:

- Regularly assess their AI usage and its impact on content quality
- Stay informed about platform guidelines and industry best practices
- Be prepared to adapt their approach to AI transparency as needed

By implementing these practices, podcasters can harness the benefits of AI while maintaining ethical standards and preserving the trust of their audience. Transparency in AI usage is not just about compliance, but about fostering an open and honest relationship with listeners in the ever-evolving landscape of podcast production.

# Transparency: Al Notice in Health Hats, the Podcast Show Notes

I use AI. Should I reference everything that AI touches? Could I add a notice to my website face page like my Creative Commons notice? I prompted Perplexity:



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<u>Create 3 sample paragraphs to use in podcast show notes to notify listeners about my use of AI in podcast production.</u>

Here are three sample paragraphs you can use in your podcast show notes to notify listeners about your use of AI in podcast production:

- AI-Enhanced Production: At [Your Podcast Name], we're committed to delivering high-quality content while embracing innovative technologies. We utilize AI tools to enhance our production process, including noise reduction and automated transcription. These tools help us improve audio clarity and accessibility, allowing us to focus more on creating engaging content for you. Rest assured, while AI assists in streamlining our workflow, all creative decisions and final content are overseen and approved by our human team.
- 2. Transparency in AI Usage: We believe in being transparent about our production methods. In creating this episode, we've employed AI-powered tools for tasks such as generating episode outlines, optimizing our show notes for search engines, and creating multi-language subtitles for our video content. However, the core content, including all opinions, analyses, and creative elements, remains 100% human generated. Our use of AI is always in service of enhancing your listening experience, never to replace the authentic human touch that makes our podcast unique.
- 3. Al as Our Production Assistant: Think of Al as our behind-the-scenes production assistant at [Your Podcast Name]. It helps us with time-consuming tasks like initial research, suggesting relevant topics, and even drafting preliminary scripts. However, just like any assistant, its work is always reviewed, refined, and often completely rewritten by our human team. We use Al to spark creativity and efficiency, but the final product you hear is the result of human expertise, passion, and dedication to delivering valuable content to you, our cherished listeners.

# Al Notice for Health Hats, the Podcast

Since I seldom accept suggestions full cloth, here's what I came up with for my website.

Health Hats, the Podcast, uses Artificial Intelligence tools to assist in production, such as audio and video editing. All automates transcription suggests titles, subtitles, summaries, and content from searches. I use AI to create images for videos. Except for final audio editing using Auphonic, I seldom accept suggestions as offered. Every creative decision is my own. I reference AI sources through links and captions, as I always have. Questions? Ask. (71 words, 462 characters)

I then prompted Perplexity to shorten my draft. The output:

Health Hats, the Podcast, utilizes AI tools for production tasks such as editing, transcription, and content suggestions. While AI assists with various aspects, including image creation, most AI suggestions are modified. All creative decisions remain my own, with AI sources referenced as usual. Questions are welcome. (45 words, 316 characters)



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### Reflection

Let's reflect on the environmental impact of AI and a person's place in the AI ecosphere. I worry about fossil fuel and water use and ponder the impact of the current shortage of electricians. According to the National Science Foundation, by 2026, electricity consumption by data centers, cryptocurrency, and artificial intelligence could reach 4% of annual global energy usage—roughly equal to Japan's electricity consumption. The production, transport, maintenance, and disposal of server data center hardware components require additional energy, materials, and natural resources, such as cobalt, silicon, gold, and many other metals. In 2022, Google's data centers used approximately 5 billion gallons of fresh water, a 20% increase from the previous year, while Microsoft's water use rose by 34%. Each AI interaction, such as a session with ChatGPT, can use up to half a liter of fresh water.

In health care, only individuals and their caregivers can compile their health data over their lifetimes from their clinical charts, wearable devices, and social and non-medical information. No one else can or will do it. When seeking health information, especially about rare and enigmatic diseases, people benefit significantly from the sophisticated use of generative AI to challenge their clinicians and save their and their loved ones' lives.

<u>James Cummings</u> says that the intensity and frequency of consumer participation in AI will vary according to intellectual capacity, creativity, and ambition. However, regardless of consumer indifference or idleness, they (or their caregivers) are given the sole administrative responsibility for aggregating their health data.

At any level of health or disease, assembling comprehensive and complete personal longitudinal health records (records over time) will always be the consumers' basic function.

What a fascinating aspect of healthcare information management! More to come.

Once again, here's my Al transparency notice:

Health Hats, the Podcast, utilizes AI tools for production tasks such as editing, transcription, and content suggestions. While AI assists with various aspects, including image creation, most AI suggestions are modified. All creative decisions remain my own, with AI sources referenced as usual. Questions are welcome.

