

**Transcript for Creating Alt Text with Generative AI  
2023 ETUG Fall Workshop: The Evolving EdTech User (November 10, 2023)  
Presenter: Ian Linkletter**

MODERATOR:

The last session of the learning is Creating Alt Text with Generative AI by Ian Linkletter. Ian is the emerging technology and open education librarian at BCIT. Now off to Ian.

IAN LINKLETTER:

Thanks very much. All right, let me get my presentation going. My name is Ian Linkletter. I'm the emerging technology and open education librarian at the British Columbia Institute of Technology. I started in January 2022. So I'm still a baby librarian, but learning a lot. My talk today is Creating Alt Text with Generative AI. Before I get going, I'd like to acknowledge that I live and work on the traditional ancestral and unceded territory of the Squamish, Musqueam, and Tsleil-Waututh Peoples. I live in Vancouver, I work in Burnaby, and I'm very grateful to be on this land.

Our 10 minutes together are going to fly by. I'm going to talk about a number of things. They're not there yet, but my slides and links are going to be at [bit.ly/ettug2023](https://bit.ly/ettug2023) slides. We're going to talk about the alt text project that I'm on, whether ChatGPT can help with it. We're going to launch the AI Alt Text Assistant. I'll give you a demo of that.

The alt text project that I'm currently on regards an open textbook that recently came out called *Basic Concepts in Applied Immunology*. It's by Simon Duffy and Supipi Duffy of BCIT, and it consists of seven chapters and an appendix with 56 really detailed images. These are scientific diagrams that are difficult to describe in 200 characters. We wanted to turn each of these images into a useful OER that could stand by itself, but it's extremely time-consuming to write descriptive text for these images. We had instructors that worked on this textbook over the summer, it's published, and now we have the next phase which is to make these very detailed text descriptions.

My question was, could ChatGPT help? Before we answer that question, I need to talk about its harms.

There are a number of ethical concerns with ChatGPT. As an emerging technology librarian, I wouldn't be doing my full job today if I didn't talk about them. I might be making OpenAI some money when I show you some cool stuff that it can do, so I need to make sure that I talk to you about this. OpenAI's CEO openly admitted, "We are a little bit scared of what we've created." They don't know how it works. They don't know why it works the way that it does. They don't know what the full risks and ramifications of the tool will be. On their website, they admit openly that ChatGPT does contain bias and all of these are links worth checking out in my slides. AI workers experience harm. They're seeing the worst that the internet has to offer. And in some cases, the subcontracting companies that were hiring them would actually have

therapists come in to help them deal with that. At the same time, paying them less than \$2 US per hour to experience that harm. The environmental impact of AI-powered tools is very significant, much more so than other cloud tools like Netflix, for example. It's estimated in a recent study that a 5 to 25 message conversation with ChatGPT uses about 500 millilitres of water to cool the servers. I pose this question as somebody that knows a fair bit about fair dealing law in Canada. Is ChatGPT the world's biggest copyright scam. In my understanding, if you're using copyrighted work for commercial purposes, you need to ask permission, and there's definitely no permission being asked. The privacy risks are significant. There was a bug back in March, I believe, where queries were being leaked to other users at random. And of course anybody that works at OpenAI can look at your chats. As I alluded to earlier, it's open in name only. We don't know how it works or why it works. There's no transparency.

All that being said, I'm going to talk to you about a new feature that came out in September called ChatGPT Vision. It was released on ChatGPT Plus only. I use my professional development money to pay for this monthly subscription. It's about \$30 Canadian per month. The way that they put it, ChatGPT can now see. I roll my eyes at that because ChatGPT does not have eyes. ChatGPT is not alive. ChatGPT does not have senses. But it is a proper analogy, I would say. Now you can upload images and seek answers about those images. The first thing that I did was harkening back to the alt text project that I was embarking on. I uploaded some of those images and just told it to write alt text. It had amazing results. It was actually understanding these scientific diagrams and describing them properly, but not perfectly. I've made a custom GPT that you can try today.

A couple of weeks ago, I think last week, OpenAI released the ability for Plus users to build their own chat bots. There had already been the feature of having custom instructions, but this allows you to do it, to make chat bots with their own specific purposes. I made one called Alt Text Assistant. How I did it is another presentation. It's really straightforward. It walks you through it with a series of conversations. If you go to [AltText.linkletter.org](https://alttext.linkletter.org) with your Plus account, you can check this out. They made this icon using DALL-E. Kinda cool. It's a rainbow coming out of a book with blank pages. I need to point out that if you use this bot, your queries are 100% private. I get a little tally of how many conversations were had using the bot, but I don't see them. I never will. So [AltText.linkletter.org](https://alttext.linkletter.org), and if you ask what is Alt Text Assistant? In its own words, it says, "I am a text assistant, a specialized version of ChatGPT designed to create concise alt text for educational images. My aim is to provide descriptions that are screen-reader friendly, typically within 200 characters, ensuring that the alt text is accurate and adheres to accessibility standards. If I need more context to refine the alt text, I'll ask for the web page URL containing the image. I maintain a friendly and professional tone throughout our interactions."

In addition to the ability to interpret images, recent functionality that came out with custom GPTs and on the Plus plan is that it can also, in the same conversation, search and browse the web. That's a really big game changer because, well, let's talk about other capabilities. It can take feedback if it's annoyingly starting its alt text with "image of," you can remind it that I am

told it not to do that. It still does sometimes. It's important to note that it cannot replace an expert. All of the feedback and suggestions that ChatGPT offers for alt text are going back to the subject matter experts. But this ability to interpret images and browse the web is really significant because that means that it can actually look at a website where an image resides and use the surrounding context to refine the alt text, which is incredible.

So I'm going to hop over to demo, and I do have a backup plan in case this doesn't work. I'm going to hop over to my browser. Yeah, can I see a thumbs up if anybody can see my browser here? Cool, thank you.

This is Alt Text Assistant and it looks like I'm not logged in. So let me hop over to a logged in window. This is what it looks like. It says the two prompts. Can you help me create alt text? Or can you help me create descriptive text? And I'm going to ask for some alt text here. We don't need to watch it type word by word. I'm going to go ahead and browse my computer to upload this. The image that I'm uploading is called untitled.jpeg, so it does not have additional context. We have this interesting image of a coughing guy. It's an image of how the body expels toxins. The alt text that it gives is "Illustration of human..." It's covered up a little bit, "human excretory and respiratory systems highlighting eyes, tears, lungs, cough, goblet cells..." I practiced this, "mucociliary clearance, kidneys and urethra." It actually can read the text in detail and it understands that this is what these systems are. This is really cool. Another thing that you can do is ask it to write descriptive text. This is where you're trying to convey all the information that's on the page. It can do that too, even with very detailed diagrams. I have another example I'll show you. I won't read all this or maybe I will, in case anybody can't see this. But I've got to watch the time. "This educational diagram depicts the human body with a focus on the excretory and respiratory systems. At the top, a labeled close-up shows an eye with tears indicating the excretion of tears and sweat. Below is a cross-section of the respiratory tract, where a cough is noted, along with goblet cells and then mucociliary." Got it. "appearance process. The lower half outlines the kidneys connected to the urethra, illustrating the renal part of the excretory system. Each part is clearly labelled for educational purposes." Maybe that last part is not necessary. That's where the experts come in. The other function that I wanted to show you, hopping over to the textbook itself, which is excellent, is if I grab this link to chapter two, where this image resides, and hop back into the thing and say, "Check out this website with the image and refine the alt text." It actually will. What's interesting is that it can't go to an image directly. You do need to download them and upload them so that it can see them. But ChatGPT Plus is able to go to websites and extract content and context from them. While this loads, I'm just going to hop over to a OneDrive document that I have going with the professors so that you can see how we've been organizing this project. Here's another image describing lymphatic drainage or depicting lymphatic drainage. Underneath you can see that I added the descriptive text that ChatGPT came out. And then underneath that this is in red with some crossed out parts, but I think the contrast is okay. The instructor has corrected it. You can see that there are substantial corrections, but still it's a good starting point for the profs. Alt Text Assistant seems to have finished looking at the website so here, it's adjusted to the alt text. I'm just going to ask it, "How did it change with the context we've looked at?" It says, "The refined

alt text was tailored to match the specific context of the image as presented on the website. The initial alt text provided a general description of the image content, whereas the refined version incorporates specific terms used within the educational material." This is really important because alt text isn't designed to stand by itself. That's descriptive text's job. Alt text is designed to give context within context in a brief way that may not convey all of the information. This is really cool functionality. It looks like my time is running short, so I'm going to hop back over to my slides and just wrap up here.

Okay, This is my backup plan just in case it didn't work. This is an example that came from BCcampus's... actually are my slides being shared? Okay. This is an example that came out of BCcampus's excellent Accessibility Bites series that's being led by Josie Gray. This example from Wikipedia of the numbered treaties in Canada, between First Nations in Canada, was an example of something that's challenging to write alt text for, and descriptive text is even more challenging because of all the regions.

This is how Alt Text Assistant described it. "Map of Canada's number treaties 1 through 11, each colour coded, with signing years 1871 to 1921 over a geographical outline. This I definitely won't read, but please remember my slides are at bit.ly... Well, I'll put it in the chat, I can't remember right now. But the descriptive text is extremely detailed going so far as to extract the years and describe the regions in proportion to each other. This kind of text is extremely difficult to write. It takes a lot of concentration and time. And this is a great starting point I think.

Thank you very much. I'm so curious to hear what your takeaways are from this presentation. Please feel free to use my tool, and if you have any questions about it, you can reach out to me today in the Zoom chat or on the ETUG Mattermost, where I spend a lot of time. Thanks, everybody.

MODERATOR:

Thank you so much, Ian. Thank you for the wonderful lightning talk and as well as sharing the custom GPT. I'll probably start using it for maybe today after the session. Does anyone have any questions for Ian?

IAN:

Definitely feel free to get in touch, anybody. I'll post the slide links now. Thanks. Well, these side links will come back later today. It looks like the ETUG website doesn't have them yet. But later today. There's a question, "Can students use this? And how could we as instructors know?" They could use it if they have a Plus plan. There would be no indication to instructors that it was used. It's totally private. Another question. "Have you thought about a way to use that function on one of the free AI versions?" No, I haven't. The Vision functionality is very advanced. Yes. The links are missing from the website. I assume that'll be updated later today. Thank you, everybody. Back to you.