Chapter 2. Bridget Johnston

Bridget Johnston started her career in Chicago at a high technology firm but then left when offered an irresistible opportunity at the Children's Museum of Indianapolis. At the museum, she designed and tested numerous displays and installations, some of which successfully went on national tour. This experience supported Bridget's development of her proficiency designing durable and usable interfaces used by humans in very demanding contexts. The most memorable display story (unfortunately not included in the interview itself) was one that incorporated computers intended for use by 7 through 12-year-olds. She spoke in detail about how home computer equipment failed—failed miserably—very quickly in the unique and intense environment of its deployment. Unforgettably, she described a youngster standing on a keyboard and kicking a joystick controller. Deadpan in her delivery she quipped, "That interface was not appropriate for the context of use." With her team, she created appropriate interfaces that survived on national tour, and she learned first-hand lessons about designing the user experience.

Bridget's career at the museum was highlighted by national and international visits with artists whose work has been displayed in Indianapolis. If she wanted, she could still be at the museum, but instead chose a riskier path.

She joined Indianapolis-based Pattern89, a startup best described as artificial intelligence-based predictive marketing for digital advertisements whose clients include Facebook, Instagram, and Google. It is recognized as the first and leading artificial intelligence tool for marketers. While at Pattern89, she hosted an important early conference at Indiana University focused on artificial intelligence. As she notes in the interview, at that early moment in its development, she saw AI as a transformative technology with great potential. Pattern89 was acquired by a larger company that licenses media content—referred to throughout by the pseudonym ContentLib—where she posted insightful blog entries about her daily use of AI and how image generation and stock images are enhanced with traditional and generative AI.

Traditional AI supports image findability and searchability via image recognition, rather than being limited to metadata and image tags. Bridget has been engaged with agentive-aided research from its very beginnings, and indeed, has been a force for ContentLib's international success and industry leadership. As the interview details, her insistence on traceability of intellectual property rights distinguishes Pattern89 and ContentLib's business model from "open" image libraries and image creation engines (those generally scraping publicly available images without regard for copyright protections). In short, Bridget's ability to see around corners allowed Pattern89 to offer the first copyrightable images created by generative technologies that any of us have heard about. Because artists/creatives are paid for the images incorporated into the generative database and sign rights over to Pattern89/

ContentLib, its output is copyrightable. This is a significant innovation and contributed to the rationale for ContentLib's acquisition of the startup.

At the time of the interview, Bridget was a senior employee at ContentLib. Again, she could have stayed and been well-rewarded in the C-suite of the organization. Instead, she left and joined a new startup still under venture capital support. Bridget Johnston is a serial innovator and artificial intelligence pioneer, and we are both grateful and humbled that she agreed to join our endeavor as interview participant.

Throughout this interview, we (as interviewers) were struck by the focus she has on ethics, team building, diversity, and social justice coupled with her vision in realizing, over a decade ago, the potential of this nascent technology to first become a disruptive emergent technology and, in 2023, a dominant and ubiquitous point of discussion for investors, technology users, and businesses. Bridget's attention to many facets of the technology make the interview complex as well as nuanced and best understood in context.

Overview of Interview

In a recent interview, Bridget discusses her day-to-day role at ContentLib, where she works closely with content creators and artists to integrate new technologies into the creative process. At the two-minute mark, she describes her responsibilities as a liaison between creative professionals and emerging tech, particularly in ensuring that the tools developed by ContentLib help unlock new creative potential for artists.

By the eight-minute mark, Bridget shifts to her current focus, which centers on collaborating with creatives to explore the ways artificial intelligence (AI) can empower them. Her work involves identifying how AI can become an ally in the creative process, rather than supplanting the human. She highlights the importance of making these tools accessible and effective for people whose primary focus is artistic creation.

At nine minutes, Bridget highlights the challenge of communicating with people unfamiliar with AI and its complexities. Many still view AI as intimidating, and her goal is to demystify it. This involves explaining how AI works in a clear, simple manner, showing how it enhances creativity rather than serving as a purely technical solution.

The discussion at the 11-minute mark moves to the future of AI and how it is set to transform industries. Bridget is optimistic, envisioning a future where AI integrates seamlessly into creative workflows to amplify human ingenuity. She believes this transformation will not only change how content is produced but also spark new forms of artistic expression and collaboration between humans and AI.

At 15 minutes, Bridget shares insights into how generative AI has already started to impact content creators across various media. While its adoption is

still in the early stages, many creators are recognizing its potential to push creative boundaries, explore new styles, and deliver content more quickly. Bridget believes AI will soon become a standard tool in the creative process.

By the 20-minute mark, she identifies the most useful aspect of generative AI: its ability to automate repetitive tasks, allowing creators to focus on the more imaginative parts of their work. AI is not about replacing creativity but rather freeing up time for deeper, more innovative thinking.

At 25 minutes, Bridget explains how AI can enhance, rather than steal, jobs. She emphasizes that AI can take on tedious tasks like editing or organizing content, enabling creatives to dedicate their time to more visionary and fulfilling projects. This shift will result in more meaningful creative work and greater satisfaction for artists.

However, at 30 minutes, Bridget acknowledges the challenge of getting people to embrace AI. Some are hesitant due to fears of job loss or a lack of understanding. Bridget believes the solution lies in education, open dialogue, and demonstrating how AI complements, rather than competes with, human creativity.

At 39 minutes, Bridget turns the discussion to biotechnology, particularly organoids, which she identifies as the next major innovation. She expresses excitement about how biotech breakthroughs could impact not only healthcare but also other fields, including sustainability and ethics.

By 42 minutes, the conversation becomes more philosophical as Bridget reflects on how humanity can rebuild a sustainable future on a planet facing environmental degradation. She believes AI and creative problem-solving will be critical in addressing these global challenges, helping to create new ways of living and working that are more harmonious with the planet.

At 47 minutes, Bridget offers advice on calculating risks when pursuing an exciting opportunity. She suggests balancing enthusiasm with practical considerations, encouraging creators to take risks but to assess the long-term impact and sustainability of their ventures.

As the interview nears its end, at 54 minutes, Bridget shares her thoughts on what is next for her. She is excited to continue working at the intersection of technology and creativity, with plans to deepen her collaboration with content creators and expand ContentLib's AI capabilities to serve a wider creative audience.

Bridget Johnston Interview

Bridget Johnston 02:00. In my day-to-day role at ContentLib, I manage content marketing for the ContentLib blog, but we also do a lot of other things, including publishing white papers, eBooks and [other] things like that. I do a lot of content strategy. With that, we are looking to work with designers, photographers, marketers, any creative across any industry [and] any creative thinker and problem solver. I'm creating content for them, but I'm more specialized in creating

content focused around artificial intelligence. I've been in the AI game for five or six years. I've transitioned my career from museums to artificial intelligence.

I did start with predictive AI and predictive analytics [for] Pattern89, which was a startup that was acquired by ContentLib in August of 2021. [At Pattern89], [I did] trend projections on what's going to be most engaging with audiences online, what image contents, video contents, color palettes, are going to most likely get people to click on an ad, or social post, or purchase something from an ad for example. We were able to make trend projections with 98 percent accuracy on what is going to get people to engage with content online with our predictive AI. That's what I was doing first, and I still do some work with predictive AI and analytics.

But now, with my AI specialty, I'm more focused on generative AI like ChatGPT. To say the least, ChatGPT is probably the most famous and generative AI you know, where you ask artificial intelligence to create something for you to write something, to outline, to research. I'm not necessarily working with ChatGPT although I do use it and I think that it does assist with my writing. But I work with generative AI that is mostly text to image, although I am doing some stuff with text to 3D, and soon enough I expect it to be text to video.

So you go in. You enter some sort of description, whatever you want. [At] ContentLib, we have a generator: an AI image generator. Ours is the first commercially usable one though. Where we're gathering data from the ContentLib library. So hundreds of millions of images, 3D models, video content … that's what we're training our AI models on. We were the first to allow people to generate something using our generator and be able to ethically use it. Because our contributors, or photographers and illustrators, or videographers, 3D modelers, they all get paid for people generating images that are based off of their work. It's all part of the licensor of ContentLib. Where you're able to license an image, but now you're able to generate an image and license it and use it without any fear of legal repercussions.

So, I do a lot of work around creating content for that. So a lot of thought leadership on how to ethically approach AI. For example, that letter. Are you all familiar with the letter that Elon Musk and all signed saying, "Hey, hey, we need to put a pause on that. We need to put a pause on AI development." I work on thought leadership and response [and] know this is the time to embrace AI. There are already ethical guidelines in place from UNESCO. You know, even if you're just getting started with an AI philosophy for your business with looking for the right AI tools to implement, there are already guidelines and best practices in place that people can use. So there's no need to put a pause on this rapidly developing technology that can be a force for good. It, I think, [will] someday be able to cure cancer. I think that we'll be able to have these absolutely world changing developments, thanks to AI. So I talk a lot about why we shouldn't pause that. Of course, there's a vested business interest in ContentLib.

I talk about those sorts of things in AI ethics. I also do a lot of product marketing around our AI products. As you know, like the "resident-in-house" creative person who understands artificial intelligence and how it works, I do a lot of

translating from the super technical side. This plays into the professional writing major, where you're working with data scientists and engineers. You're translating to describe what these products are doing for these creative audiences who are using them. *Solopreneurs* can't always hire a graphic designer and are instead trying to do it all themselves. I'm trying to translate this very technical piece of technology that you can use in your real life in a practical way. I'm doing that kind of work, too. I know that was a very long-winded answer. I did want to give an idea of the predictive AI that I started my career with and the generative AI that I'm mostly focused on now.

Michael Salvo 08:03. I don't think you should be apologizing for the answers. This is wonderful. I'm particularly struck by your use of the phrase "communicating with creatives" and going from the highly technical and highly specific work of the data scientists and translating that to a population known for being difficult to communicate technical information.

Bridget Johnston 08:32. It can be particularly difficult with AI. The challenge I have always found is that we're getting to the point where people are really starting to talk about, "Will it be sentient?" or "Will it be able to make horrible decisions?" and that is something we have to be conscious of not allowing it to do. Hence, why we should follow the UNESCO standards. I can send you all this information if you'd like to reference it. I also think that there needs to be some sort of government regulation of artificial intelligence. I don't know if you saw that the Biden administration this morning announced that they are looking into regulation of AI. I think that's something that will be important.

Anyway, in communicating with people who were familiar with AI, I feel like a large part of the population were familiar with it from science fiction movies. Things like *2001: A Space Odyssey*, *Terminator*—all these horrible applications are scary. So not only are you translating from a technical perspective to a creative perspective, which is challenging in and of itself, but culturally we're starting to get more open minded about AI. There is a lot of pushback, and there always has been, at least in the last five or six years I've been doing this. People expect something scary, job stealing, or life changing in a bad way. You have to get over those hurdles in that communication as well.

John Sherrill 10:21. Since you're dealing with the technical and creative side, one of the things that I was wondering about is how does ContentLib's AI compare to something like Midjourney or DALL·E 2? Obviously, there's an ethical difference, but functionally, what's the difference?

Bridget Johnston 10:47. DALL·E 2 is actually created by Open AI, which ContentLib has partnered with. We are using some of their technology to train their models on our data set, the ContentLib library. DALL·E 2, Midjourney, Stable Diffusion, a lot of these generators train off data that is scraped from the web … which could be anything.

[For] example, there's a lot of unethical data on the web. As we know, there's a lot of information that is racist, sexist, homophobic, whatever you want to call

it. The truth of the matter is a lot of [the] data out there that is scraped from the web takes into account all of that. You can start to generate some things that aren't good. At least with our [AI], there are some safety protocols. We've worked on removing all indicators of race, religion; things [that are] visual indicators for people. So say when you generate a doctor, it's not going to just generate a White guy. [W]e have been able to create ours in that it is inclusive of anyone who can be a doctor. Age, gender, race, whatever … there aren't going to be any biases in that regard. Whereas something like Midjourney, because it's collecting everything from the web, they don't have the safety protocols in place where ContentLib has been very intentional about that.

And then, just the ethical sourcing too. I'm sure you've seen a lot of news about lawsuits. There's tons of legal battles going on like "does this steal from people" [and] "does this steal from creatives?" I honestly do think that you could make an argument either way. I have been able to feel comfortable and confident in pursuing AI and my career at ContentLib because we do compensate [creatives]. You know, if you opt in to allow our models to train on your content, you're going to get paid. I think that's the only way to do it. I think we're going to see a lot more of that in the future. So the ethics behind that are solid. It's not stealing from anyone, I would argue; precisely because people get compensated and that's [what] sets us apart.

John Sherrill 14:35. So it's primarily in the training data rather than the interface or function?

Bridget Johnston 14:44. Because of the compensation part of it … with the interface, you are able to license any image that you generate from ContentLib and just use it for whatever purposes you need, which is a huge benefit. Adobe announced that they are creating an AI generator [that] works the exact same way as ours. It's trained on Adobe Stock. They are compensating people the exact same way and announced it around two weeks ago, but we announced ours in October. So, we were ahead of the curve. I think another big player in the game is following suit because this is the only way to do it. This is the only right way to do it.

Bridget Johnston 15:50. Think about AI [as] we're living in a new world. I cannot stress enough. Yes, I realize [I have] been in this world for the last several years but, this technology is a pinnacle to society, like the invention of the internet. Artificial intelligence is arguably one of the greatest inventions within my lifetime [and] it's going to change everything. We are already using it, we have been using it for years. I don't think people necessarily realize that. [For example] their Google Home or face detection on their iPhone, is a form of AI. But it is going to change everything and with that there will be more problems, there will be *new* problems, and there will be new *solutions* to things as well. It is the nature of life [and] I think [once] this new technology gets introduced, there are going to be problems that we can't even fathom in five to 10 years from now. But there will be a whole lot of solutions as well. I brought up curing cancer earlier, LG is one of our partners. They are using ContentLib data to train some of their cancer

detection models. Some of their cancer detection AI data is training [on locating] cancerous cells to the accuracy of a specialized oncology doctor. There are not [a lot] of specialized [oncologists trained for reading images] or as many cancer detection models as we would need but we're able to have AI do it. Then in turn, those oncologists can go do other things—hire, [do] different work, have different focuses like, research, treating patients, [etc.]. It is one amazing solution that AI is bringing to the table. They can focus and it is funny, I said, I had this idea.

Bridget Johnston 18:33. I brought it up to my brother in early 2020. He's a medical doctor, a surgeon specifically, and I said, what if we had AI that was able to detect tumor growth, a long time ago in terms of like AI language, or AI timelines. He was like, we will never use that. Doctors will never use that—it is never going to [happen]. So [it] just goes to show how quickly [AI] is changing—well-established in fields like medicine already that have been doing things their ways for a while. But they're all adopting it as well.

Bridget Johnston 20:38. I feel like it's at a point where generative [AI] right now is at a point where it can help with mostly brainstorming and idea generation, I think that it can help with photographers. Let us look at product photography, for example. Let us say you sell smartwatches; you can relatively quickly put together some concepts with generative AI. I think that where it's at right now—you can brainstorm some product shots, say, the watches on a wrist, the watches in a box. You can generate and get some ideas and be specific about lighting, different settings, materials. You can brainstorm those aesthetics and see what works best for your brand, goal, and campaign. I think that is the easiest answer, particularly for marketers, photographers, illustrators—you can brainstorm [what is] best. In terms of writing, like ChatGPT, I think that it is something that [people will] need to embrace, to stay current. Same goes for visual generative AI as well. It can help enhance your work. It can help enhance your brainstorming for graphic design and product shots. It can also enhance your work with writing.

The other day, I got an assignment to write a blog post for marketers on what is open-source AI. I asked ChatGPT, can you outline this for me. It spit out an outline [in] 30 seconds. [But] is [it] good [enough] quality to publish? I don't think so. I'm critical of ChatGPT and I can tell when people are just using ChatGPT. I had a writer, I manage writer schedules and things, and I could tell she was using ChatGPT [in this situation]. Then I told her this isn't high quality enough, but it is able to help me and my work. Like "What is Open-Source AI," which I know what it is, but it's nice just to have some guidance and a structure. ChatGPT was able to put that together. Did I use all of what it said? No, I added some sections to it myself. I adjusted some of what it said. But it was able to at least get a good head start on some of that creative brainstorming, some of the things that you can't leave out in that creative brainstorming process or creative structuring process for writing.

Bridget Johnston 25:12. I think that we're a bit further out. And one thing I didn't quite say with photographers … like with product photography,

brainstorming, and things like that, it's good to prepare yourself and have ideas and then give direction. Let's say you're hiring a photographer to do your product photography, you're able to come to [them] and say, "Hey, I like this lighting setup" and give creative guidance, so you get exactly what you want. So I think that it's good for providing direction like that.

One of my good friends at ContentLib—she's an illustrator, and she does freelance illustration and things—[is] having a ball with using generative AI to think up wild, crazy ideas for that creative inspiration. For photographers and illustrators, if you really want something, if you want it done in the best way, if you want creative ingenuity, there are some things that machines will never be able to replace with people. I think some of the quality of nuance, illustration, photography, and things [is that] it won't ever be replaced by artificial intelligence. We'll always need photographers. We'll always need illustrators. Little flourishes that [artificial intelligence] might add here and there, textures, or things like that, only a human [illustrator] will be able to do that in the best quality.

You might be able to say, "Generate a cartoon of a flower vase" but it's just not going to be as good as hiring somebody to do it. Now, if you were hiring somebody to do illustrations for you, you could certainly, at least today … use a generator, come up with some creative ideas that you like, create a mood board, and share it out with people. But the only way to get exactly what you want, especially if you have a strong sense of creative [or visual] direction, is to work with another human. AI can certainly speed up some processes, [and] help with idea generation. It'll help to enhance work, but not necessarily steal work away. I think that it's going to free people up to focus on higher value work rather than automate all the writing jobs. There are just some things that people will always have to do.

John Sherrill 28:08. Yeah, it'll get close enough. And for the low-end market, that may be good enough.

Bridget Johnston 28:14. Yeah, I think so. You know, there's some stuff that is culturally, [or] rather annoying, people are using it for. For example, I think it was Levi's, but they wanted to have more diverse models.[6] Instead of *actually* hiring people, they just used AI to generate [models]. I don't know why we would necessarily do that, but we see a backlash in that. I feel like the response to things like that have been hugely negative. It kind of goes back to that "new problems" AI is introducing. There will be backlash, or people asking those using AI to do better. I think that there have been lessons learned from that example … I don't know, I kind of went off on a tangent there.

Michael Salvo 29:30. It's a great tangent.

Bridget Johnston 29:34. It's just like such an eye roller. Like come on, guys. Really! There's one thing you could do, that's [like] way better.

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6. For more on this incident, see Weatherbed, J. (2023, March 27). *Levi's plans to use AI clothing models to "increase diversity."* The Verge. https://www.theverge.com/2023/3/27/23658385/levis-ai-generated-clothing-model-diversity-denim

Michael Salvo 29:46. One of the things that you said—that I keyed in on—is that it frees people up for higher value work. I think that's a really key part. It also takes a lot of the drudgery out of it. It's still horrible to look at a blank screen. Even if it's nonsense, GPT does a good job of giving you something to start with.

Bridget Johnston 30:11. Yeah, I agree. And you know what I mean: to take out the drudgery. I know what it's like for that blog post. I have to write about Open Source AI, what is it? I know what it is. I don't need to spend an hour of my time being like, "Oh, maybe I should include this" and create it. Just do it for me, because I have other stuff I have to do. And then I'll get back to this and I'll base some of my writing on what GPT turned around for me. Not all of it. But yeah, big time saver, for sure.

John Sherrill 30:53. Definitely, I think you've answered my primary questions. I think Michael wanted to ask a little bit about the industry conference that you hosted.

Michael Salvo 31:05. I think that's where John was trying to start with things that you and I have discussed before. And you brought it up again in talking to your brother about innovation. And you know, for me, I'm very interested in innovation. I'm very interested in helping students when they're in the classroom, or young professionals to think about how they can think about innovation, how they can think about preparing themselves for a future that's unknowable. And you very interestingly articulated that future as AI being the most important technical development within your lifetime, as the internet is for me. When I was writing about power generation, I said that everything is just a version of the steam engine until we get to photovoltaic cells. That's the real breakthrough moment. Also a woman inventor whose work was originally deemed unimportant—Katalin Karikó at University of Pennsylvania (Karikó, 2023). I want to go back to when you started with AI. If you can think about what made you put that industry conference together? What resistance did you overcome? What made you think this really is the big stuff that it's going to become?

Bridget Johnston 32:48. Yeah. I did pull some links here for you all earlier. I'll send you the press release to that conference. Some action items, and then a bit of a preview for the conference here. For this conference in particular, I was the sole marketer for this AI startup. And this was all starting in like, 2017, 2018, I think, is when I started at Pattern89. It was just like, some sci-fi stuff, you know, nobody was really talking about it really. Now everybody is and everybody wants a piece of it, but back then it was very, very difficult to get people on board. But of course, we were a high-growth startup that I was responsible for, or, marketing was responsible, as in myself, and my intern, Hannah, who now works at ContentLib. But we were the only ones responsible for like 50 percent of our company revenue that had to come through marketing. So it was pretty high, and my most stressful job to date. But anyway, one of the challenges that I found was that in a world when ChatGPT didn't exist, AI really wasn't really a thing yet. I could foresee that it was going to be a thing, hence why I left museums to go into it. But, there were just so many

challenges around talking about AI. And then, you know, it's like, yeah, this may be cool, and cool to play around with, but my main focus at that time was like, "Okay, but how do we get people to spend money on it? So how do we grow this business?" And so I was looking towards R. J. Taylor. He was our CEO, he's a great mentor of mine and he founded Pattern89. He and I kind of put our heads together and we were like, "Okay, well, you know, the only way to let people really market towards marketers is to get industry leaders on board and get them talking about it." So, we partnered with Indiana University School of Informatics down in Bloomington to put on a one-day conference where we brought in some academic leaders from that school as well as some business leaders in technology to speak. And we brought in some of our clients as well, but opened the invitation to other leaders within the marketing and advertising industry throughout the Midwest, where they could come down to the AI executive summit: High level people that we needed to buy in, for artificial intelligence use in everyday applications with their teams. So what we did, and I actually had Hannah send me a bunch of materials that we put together, because it feels like it was a lifetime ago. This was in February of 2020. A lot has happened since then. But she actually saved everything that we worked on. I was reviewing that earlier today. We were able to get people in academia, as well as within business, give talks, work on panels explaining how you can actually use it in your day-to-day life and in your day-to-day work. That was our main goal. And it addressed the problem, which was the core for me: "how do we build revenue?" How do you get people to buy into artificial intelligence and see its value and see that you can use it every day, and it's going to save you time, it's going to enhance your work. So yeah, it goes back to that idea of freeing people up for higher value work. Does that answer your question?

Michael Salvo 36:59. It does. It's risky. I mean, I remember when we were talking about how you're moving on from museum life, and if I'm remembering correctly, and I may be embellishing, but you saying, "I could stay here for the rest of my working days. I've made a good home here. And they like me, and I'm moving up, and I can stay here. But I don't want to." Making that move, you went to Pattern89, which was life changing. I remember then, you talked to me, it was like, well, we're getting acquired. I can't tell you who by.

Bridget Johnston 37:48. Yeah, there were like two weeks I really did worry about my future. But then I realized there is some common [value] and somebody else sees value in this. So yeah.

Michael Salvo 37:57. To me, it just speaks to your ability to see beyond the horizon. And as, as you're saying, there are so many people now who are jumping into AI. You know, we have the moral panic folks, talking about AI and writing instruction, and they're wringing their hands. And it's like, we've been talking about this coming. John especially wrote his dissertation in part about the coming revolution. It's just the newest technology. You know, my parents are fine with the fax machine, but email still baffles them sometimes. Right? Because they were comfortable with that technology. That conference is a big part of you taking

people who are supposed to be comfortable with technology and convincing them to be comfortable with this new technology.

Bridget Johnston 38:41. Yeah, that was definitely a big goal of the conference. You know, because you need—especially with business—you need that leadership buy in. If the CMO or the CEO gets excited about AI, you know, that's great for us as a small business. I guess I would say, at this time, it's about damn time they did. But yeah, it's always been interesting. And you know, there's always going to be something new. I don't know. Are you all familiar with organoid intelligence at all?

Michael Salvo 39:17. Go on.

Bridget Johnston 39:20. Yeah, I just sent you an article.[7] I talked to my brother a lot about this, actually, I think that this could be like the "next, next" big thing. Basically, with AI, there's limited computing space. But there is—I forget where the research is out of—but I did just send you an article for it. They're growing brain cells, replicating brain cells and growing them where cells are the ones computing. So you know, the human brain. It's limited in size because of our skulls and whatnot. But right now, they're trying to figure out a way to create something with unlimited computing power made of human brain cells. They've already taught it how to play Pong. That was one of the big things—the little brain cells in a dish—know how to play Pong and play it well. But I think this is something [that] there will be ethics involved with it [being] artificial intelligence. But we are moving away from computers, as we know them now, to biotechnology, where we're integrating a lot of what we learned from artificial intelligence into creating systems and having systems run off actual brain cells.

Bridget Johnston 41:21. I feel we got this because of AI and artificial intelligence. We're trying to find ways to make it more efficient and not as limited as it is. Feedback loop indeed. But I think that [it] might be the next big thing. I don't know—that [is] what my gut is telling me.

Michael Salvo 41:52. I love it because that gives us something to think about, like if AI scares you wait until you hear about bio-computing.

Bridget Johnston 41:57. Some people online are having conversations, "Are these like cells in a petri dish right now? Are they human? Do they have rights?" You start to even introduce those questions.

John Sherrill 42:15. [Comment inaudible.]

Bridget Johnston 42:30. I don't know—new problems, new solutions, new scary things, but hopeful things, too. I think all this brings into play.

Michael Salvo 42:44. I mentioned the other project that I'm working on. That that project is about hope, about how you reconstruct a viable future on a damaged planet. The research you are talking about is about getting us to think about what we do now in order to make better futures possible.

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7. "How to Use Generative AI for Real Work" https://www.bridgetjohnston.com/work-samples

Bridget Johnston 43:41. I think ultimately we will be looking for solutions to problems like climate change—waste management, sustainability, things like that. I like to believe that ultimately people are looking for good—trying to do good beyond surviving in this capitalist system that we live in.

Michael Salvo 46:17. What advice do you have for someone who is either early in their career or faced with making a big choice? Do I stick in this safe environment or do I take this risk? Or if someone's trying to decide what [path they are going to take]? Focus on what they will likely concentrate on as an early career professional? How did you sort it out? How do you think about that? If you were advising your intern, saying, here's a good route for you?

Bridget Johnston 47:11. I would say always stay sharp, always try to do the new thing—if you can. There were some critical times in my education [and] in my career, where I've made a choice to pursue something that I would not have necessarily done. For example, I don't remember the exact class [or] the number. But [the] class where we [built] web pages—that was like a key [for me]. [It] was a key change—[a] key point in college. I was like, "wow, this is fascinating" and "well, it's too late, because I have to graduate early."

I don't know why I was like that, but I just was at the time. I was like, I must be done with school, and I must start my career. It's too late for me to go and study computer science at this point. But I got an interest in this area and started pursuing it on my own. [The subject] was viable, and the world looked at technology a little differently. It seemed economically viable, because [at the time] we were getting hit with all these layoffs in technology, things aren't doing the greatest. It [ended up being a] great long-term investment. [It] seemed kind of a good, economically viable way to go. It was also interesting [to me]. I've always been interested in trying to keep on the cutting edge of things. So, there was that. Then my old boss had approached me about Pattern89. It was at a point in my life where I had learned what I was going to learn at the museum and I love the Children's Museum of Indianapolis, it [was] great. I would have been doing cool cutting-edge things for a museum. But not necessarily cool cutting-edge things in the world of technology, and the AI [offer] seemed too good [to] have a chance to pass up learning this new technology. At [this] time, I was [also] like, "I don't know, if we're going to have it actually pay off." It felt like a risk leaving that museum that I loved and gave me so many wonderful opportunities to pursue. I [thought it] was a good risk to take, at that time in my life—everybody in my family was doing well, everybody was healthy, everything was fine, [and] I had a good safety net built from the museum. So, it was a calculated risk, [but] I took it.

I would say to students—if you can calculate a risk, if you're excited about something, if you really truly believe it—[do it]. I have said that it would be kind of hard for me to rejoin a startup again. After I did it once you always worry if lightning can strike twice. But I really had this gut feeling about Pattern89. Now I say I would join a startup if I had that [same] feeling. If you have that feeling, and if you feel like you can take a calculated risk to the point where you join a startup

or something like [it]—do it. But only do it if you believe in it. I like looking back to that college class. I believed in it, I bought into it, I was excited about it. There have been some points in my career [and] in my education, where you get that gut feeling that something is good, and you should pursue it. Then if it is a career change or something, calculate the risk associated with it. If you feel like you can do it, go for it. You can always go and do something else if it doesn't work out—[I say that] from a position of privilege. I was able to build an economic safety net for myself from working at the museum and have those years of experience. So, I would say look at the risks. If you feel excited about something if you truly believe in a field or a technology or something [along the lines then] pursue [it]. Even if it is a higher risk thing—like joining a startup. If you truly believe in it, you truly believe it can work, I think you should try it. Don't be scared of something new, weird, and fantastical sounding like artificial intelligence. That all goes into that risk calculation part. But [AI has] caught on now—as crazy as it was five or six years ago.

Michael Salvo 51:52. And that's the problem with hindsight, right? You don't know what's going to hit?

Bridget Johnston 52:00. I could have felt that way about something that may not have been successful. I feel like with AI, it worked out well. There are all kinds of industries who are incorporating it into their daily work practices.

Michael Salvo 52:19. What were you expecting me to ask about that I didn't?

Bridget Johnston 52:25. I wrote this book all about practical use of AI, explaining what it is and how to pursue it ethically, and how to use it in daily life as a creative person, and as a problem solver. Whether you're a graphic designer, project manager or writer, [how AI supports your work]. It's coming out soon and I want to share it because I feel like it summarizes a lot of these ideas.

Michael Salvo 53:11. I'm going to have a lot of reading to do.

Bridget Johnston 53:36. That was one of the things when I saw Elon Musk sign that late letter. I was immediately suspicious. Then, I was like, "wait a minute"—I feel that the letter in particular, [all] these people who signed it—a lot of them do have vested business interests. Because it's one, I think, it is a direct attack on Open AI—who [also] created DALL-E and ChatGPT. It's all these other big dogs and in Silicon Valley being "wait, wait, wait, wait, wait, we need to catch up here—we need to we need to do something about this."

[54:00 Michael and John respond to Bridget's comments about working with the artist Jamel Reynolds, who uses generative AI to produce artwork. From 55:02 to the end, Bridget talks about what she will be doing for Jamel Reynolds.]