



Make Your Story
Purdue Libraries and School of Information Studies

Season 3, Episode 2: Adventures in AI

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AB: Hello and welcome to another episode of Purdue University's MakeYourStory podcast, celebrating student stories of making and creating new and exciting projects and innovations all over campus. My name is Dr. Annette Bochenek. I work as an assistant professor and business information specialist at Purdue and I am your host for today's podcast episode. As a librarian, I frequently see Purdue's Library and Information resources aiding in the research process that prefaces so many of these projects of making and creating. Today, our story explores a hot topic that has affected numerous disciplines: artificial intelligence. There are so many different tools available today that utilize artificial intelligence, with some of the key hallmarks of the resource being speed and efficiency. In this episode, we'll delve into the creation of one particular AI tool called Quasi and speak with its creators, Shantanu Roy and Thomas Stahura. I'm so thrilled to share my conversation with them here. Welcome to the podcast. First of all, please take a moment and do tell me about yourselves and what you studied at Purdue.

SR: Yeah, my name is Shantanu. I'm currently a senior studying selling and sales management in the JW Marriott School of Hospitality and Tourism Management. So I've very much been involved on the sales side of things. But I also love marketing, design, kind of anything that doesn't have to do with coding. I'm the guy.

TS: And I guess on the flip side, my name is Thomas. I'm currently a senior in interdisciplinary engineering. I started out in computer engineering and realized it wasn't really for me. I wanted to expand my horizons. I do most of the coding. I also do a lot of AI on the side. I was very early into the big AI boom we're seeing now.

AB: Very cool. So fun. And I feel like AI in general is just such a hot topic now. So it's really fascinating, I think, in terms of how versatile it is and where it is applicable. And that's to almost everything, really. So tell me a bit more then, about Quasi, then. How did your entrepreneurial journey with Quasi begin?

SR: So I think before even Quasi, just like how the two of us met, it was kind of a fun story where I hosted an entrepreneurship networking event, just kind of because I was new to campus. This is like freshman/sophomore year. Around that time, COVID was still super big, but I wanted to just meet more entrepreneurs and builders. And then Thomas ended up coming to one of the events that I hosted. I didn't really like him at the time because he was working on something.

TS: Kind of at the time, I was working on a different startup. I was in Datamine corporate partners and I was interning for Kraft-Heinz doing AI review analytics. So I would essentially go to Amazon or wherever Kraft-Heinz products are sold, scrape all their reviews and then figure know if the consumers customers are liking the product. They don't like the product. What do they like about it? What do they not like about it? What could Kraft-Heinz do to change? And I would make reports for Kraft-Heinz and I did this for Kraft Heinz and then got a bunch of friends, like a group of friends together from back home. I'm from Seattle and started like a little review analyst company and basically just did that for other people besides Kraft-Heinz.

SR: And so kind of know he was sharing with me all of that. And I was like, oh, this is kind of interesting, but it was not my cup of tea. But then a couple months after the event, we met up again because Thomas had a really interesting idea that he wanted to share.

TS: Yeah. During my time, the previous startup was called Ponder. Kraft-Heinz asked us to create a single review summary of a bunch of reviews. And that's something I've never done before. I was doing like sentiment analysis, that sort of thing. And so I just went into Google, went into a bunch of forms and stumbled across this thing called GPT-2 and people were like, you can just use this to summarize all these reviews. And I was like, oh, cool. So I got it running on my computer and I summarized the reviews and then I started messing with it. I'm like, wait, this thing is really cool. And at that time, that startup got into, we were one of the first startups to get into Microsoft for startups. It was like Microsoft's accelerator program. And Microsoft just made the first investment in OpenAI. And so I emailed my contact at Microsoft. I was like, hey, we're using this thing called GPT-2 for our business. I've heard that there's a GPT-3 at OpenAI and you guys just made an investment. Do you think I could get access to it? And then the person responded like, what's GPT-3? So I was like, okay. So then he forward me to somebody else. Forward me to somebody else. And eventually I got in contact with somebody at OpenAI and I was like, hey, work on this project. I hear you guys are working on GPT-3 can I get access to it? And the guy was like, yeah, sure. So he gave me basically a token, an access token so I can, an API key so I can use GPT-3 I was messing around with it and maybe doing a little bit of my homework with it. And I made a website called Anything Expert. It was just like a chat bot. You could chat with it. And back then, all these applications that uses OpenAI's API, it has to get approved by OpenAI or it can even get launched. All this stuff, all these hoops you

have to go through, I just did none of that. I just launched it and made a Reddit post, and then it blew up and then we met up a second time.

SR: Yeah, and about that. Yeah. And for context, this was like October 2021, so this was over a year before Chat GPT even launched. So Tom has built basically the first version of Chat GPT designed for Purdue and our homework and basically like an AI tutor. And so he was sharing with me this idea, and I was like, wait, this is super cool. This is like one use case. Let's see what we can create with this. And then what we ended up learning after just talking more and more was like, hey, this AI stuff is going to be the future. We know that this has tangible value, but making one specific use case, like a chat bot just for school, if we end up charging for it, we're like, oh, there's going to be other competitors that come out and it'll be a price war. Eventually everything will be free and no one's going to win except for the customers, which is great, but as a business, that's not awesome. So we were like, okay, let's think about this a little bit more. Instead of making one use case, what if we could make a million use cases and all these micro needs that every single person has? We could just build a platform that hosts all of it. And so basically, other people can build their own use cases on top of our platform, and it's a super easy interface, like no code whatsoever. And then we'd essentially just charge for access to all the models, as we called them, for basically next to nothing. And so that's how the first product came about with Quasi, which was like a marketplace of just little use cases that everyone could use. And from there, we ended up learning a lot, because thousands and thousands of people were using this product, and we kind of bucketed them into two categories. One is like a lot of people are using it for productivity, which is kind of what we see now with Chat GPT. Then there's this second group, which a lot of people use for entertainment purposes, which we thought was kind of interesting. And so we ended up exploring that a little bit more and started building a new product that we now call fiction, which is essentially, how can we use AI to personalize entertainment for every single person? How can we create compelling content at scale for every single person? And so that's kind of a thesis we've been running with and that we're currently exploring further.

AB: Gotcha. And so do you feel, is that kind of your main focus right now with Quasi? Is it exploring that entertainment portion in more depth?

TS: Yeah, I think that AI is still very new. I think that a lot of people are using it in the right way. But also a lot of people are using it in not the best way. A good example is, take an early computer. Imagine you're trying to sell a computer in the 80s or early 80s, late 70s. It's like your value prop for the computer is you can do Excel on it or you can do spreadsheets on it, and that helps. But when you're trying to sell that to a customer, they're like, well, I've already been doing spreadsheets by hand. Why do I need to pay \$5,000 for a computer to do it for me? And that is a very valid point, but everything changes when your spreadsheet has, like, a million rows. Now you can't do it by hand. Now, all of a sudden, the computer becomes extremely important, and we're seeing very similar things with AI. It's like you can get AI to write you one poem or make one book, but anyone, given enough time, can make a poem, make a book. But where AI becomes invaluable is when you need to make a million different poems for a million different people. And we're sort of not used to that. We're used to, like, this one size fits all

world where you make one post on social media, and that one thing gets seen by a million people. But now with AI, we're going to soon see that you can make millions of different things for millions of different people made for them. And that is where I think the technology will truly become invaluable.

SR: Yeah. And this is something that we see. This is a societal shift. It took over a decade for the computer in the start emerging into the mainstream. And so this idea of personalized entertainment has kind of been around. I mean, we see it with TikTok, with their recommendation engine, but what they're doing is they're just funneling content that they think would be interesting to one person. They're just, like, reusing the same content. But what we're doing with fiction is we want to build and create brand new content for every individual. Stuff that no one else has ever seen. Like, you're the first person to ever see this thing and it's made just for you. And it's like this kind of like special feeling where it's like, wow, I'm really enjoying this. This is awesome. And so kind of doing that at scale, we're going to start to see more and more of this sort of personalized entertainment being generated on the fly.

AB: Yeah, and I think that's just such an interesting aspect of it, too, because so much of this podcast focuses on making and creation, and this is just such a unique form of creation that is so curated, I think, to the individual at this sweeping, large scale that AI is able to do. So I think that's just such an exciting thing and yeah, it's just so fascinating to see it from your perspective too, and to hear about it.

TS: For sure.

SR: I also think that another thing that we've been thinking about a lot, especially with fiction, is like TikTok and a lot of these platforms where they push personalization on, you say, like we're making a personalized feed. I think one of the things that a lot of people have been talking about with AI is still, I think, relevant to TikTok, which is that it feels like as a creative, I'm being kept out of the process where AI is generating stuff or TikTok is just recommending stuff at me. There's no level of interactivity where on TikTok I'm just doom scrolling and I'm not engaging with the content. I'm liking it, but is that really helping curate my content? I don't know. And same thing with even just using basic Chat GPT, it's like a lot of these writers or artists, they feel threatened because it's like doing a lot of the heavy lifting. There is a happy medium where stuff can be a little bit more curated for you, but you still get to interact with it and help carve the way it goes. And so one of the main things that we built on fiction, which that's live right now, is it's like AI-generated short stories, but at the end of every chapter, you get to choose how the next chapter goes. It's like a choose your own adventure.

AB: Yeah, totally.

SR: Right? You get like three options. It's like, oh, Sally is going down this road. The three options, she gets hit by a car, she steps into a puddle, or her friend says, hi, you can choose an option and the story will automatically evolve. And so that is still involving you as the user in the creative process. And so I think there's going to be this new era or new way of creating that

will still need humans involved. And so I think that's something that is not being made right now, and we really want to focus on that element, too.

AB: So interesting. Well, also, so I guess in terms of development, how did libraries factor into your research process? What resources did you find yourself maybe like tapping into and using?

TS: Yeah, well, there's a bunch of Python coding libraries that are very useful, and a lot of OpenAI has made their own library, which is very popular. But I think that a lot of the resources that we used is AI. In a weird way, it's helped us build this app, this ecosystem, all of us—at least all the developers, use GitHub copilot, which is an AI tool that helps write code for you and using that tech and a bunch of other stuff that we've learned, we were able to completely automate the writing of our back end. We were able to completely switch the language of our code base midway through development and code from scratch and launch our app on the App Store in a week.

SR: Yeah. And on top of that, it's like even when it was like 2021, when Chat GPT didn't blow up and people were still saying, NFTs are the future, what is this AI thing? We don't believe in it. There was a lot of research papers that we were looking into, because way back when, in 2016, 2017, Google released the first version, or they wrote a huge paper about this thing called a transformer, which is what GPT is based off of. And so getting access to those things, understanding the infrastructure and the foundational elements through the library system, was also really helpful. Then, from a business side, understanding those different elements, trying to understand the art of creativity, it's like, from a business perspective, it's one thing, and meeting investor demands and metrics, but also thinking of it from a human-centric perspective, because I'm a designer. So just leveraging all of these different resources, trying to see how we can merge kind of technology and the liberal arts, or kind of the human aspects of it, I think was something that the Purdue Libraries were very helpful with, as well.

AB: Excellent. And then I think, too, on the business side of things, we chatted about market analysis pieces, too. Are there any tools that you found yourself relying upon in terms of thinking about the market overall or who you're potentially going to target this to?

SR: Yeah, I think especially when it comes to trying to predict the future or make just those huge vision and outlandish statements. Right. As a startup, you kind of have to do that. You have to take a page out of the. So, you know, a lot of things that we were looking at was like Barnes and Noble or Wattpad, which was the first online reading forums, and those sort of areas where it's like a lot of these people that love just consuming content, or they love reading books, or they like this huge creative angles, understanding what worked in the past, and how can you remaster that with a lot of these new technologies? And so really thinking about it from that angle, I think it was less about doing analytics or market, it was more of just like, what has been the mentality towards these different areas, and how can we sort of bring it into the 22nd century? If you think about it, it's like, how can we add the technology layer that's emerging? So I think a lot of the research that we did was a lot more semantic based and less analytics based.

AB: Great. In terms of your journey with this particular approach and Quasi, and all the developments there, what were some of the biggest challenges that you encountered along the way? I'm sure there are many.

TS: There are many.

SR: Wow, this is a good question.

TS: I think, especially in the AI space, staying focused on one thing is much harder to do than you think, because we've had a lot of people, I've had professors come to me asking for chat bots. I've had Purdue come to me asking me to build AIs, different companies, startups.

SR: We had a politician reach out from the university say, we want you to build an AI to help us with our political campaign.

TS: We've had Microsoft put us in front of the Doordash of Portugal.

SR: And the Instacart of the Netherlands.

TS: And they all want different things, and there's so much opportunity and there's so many things that need to be made where it's. I feel like, at least speaking for myself, the greatest challenge has just been to say no to a lot of these things, focus on one thing.

SR: And I think, for me, this is just like thinking of it from a business perspective. It's like a lot of people don't realize that AI is a technology. It's not a solution. And so you have to first find a problem that needs to be solved. And for us, we found that with like, what is the next generation of entertainment? How can we add people back into that creative process when it comes to being entertained? And that is like a tangible problem we didn't start with. AI is cool. Let's figure out how we can implement it into something. And I think that was a challenge that I've learned and experienced firsthand, which was like, start with the problem, fall in love with that problem, and then figure out what technology you need and build it in order to address it. So that was just like a huge challenge and a huge learning experience for me just through building Quasi and fiction.

AB: Interesting. It's almost like the research process itself, where you, ideally you go in with some sort of a thought or a question that you have instead of just broadly entering in. Because AI, again, is just something that, as we've mentioned it is so varied. There are so many capabilities and so many potential things and issues that you can address with it. But, yeah, approaching it from this really targeted, focused way, I think hopefully settles down some of the other chaos that you can run into with it. Because, again, it is, I think, very easy to get off track with it because so much is also being done with it and being explored for the first time, really, too. So it's exciting. Yeah.

SR: And even, like, drawing parallels to the research process, I think entrepreneurship is very similar to research, except I would argue that it's like a lot more action based, where it's like, hey, we have a thesis, we have some proof, whether it's social proof or just like market trends, whatever it may be, to back up this thesis. But instead of just delving deeper into that thesis, we build a product to test it. And then we say, okay, this worked. We talked to customers, we talked to investors. Investors are not interested. Customers are interested, or investors love it, customers don't. And then we kind of keep reworking that thesis. And so I feel like it's a very action based research process, which I find way more gratifying because you get that immediate feedback, which is great, excellent.

AB: And what were some of the successes? Do you have, like a specific moment that you're especially proud of or a particular moment in the creation of Quasi that really stands out?

TS: At least. Speaking for myself, I just like making things, and I especially like making things that make things. And I think especially with entrepreneurship, there's so many downs where when you have one up, it has to last, like ten downs if you're going to keep going.

AB: So true.

TS: And I think at least a lot of what I found is the thing I sort of fall in love with the most, and like, the most is the journey of entrepreneurship, the trial and error, the little bits of learning that happen and just building a cool thing with a bunch of cool people and just being able to talk about this awesome tech and work with it every day.

AB: Yeah.

SR: One of those cool things that we ended up building was an AI music radio station. And so this was like February of 2022. So still before Chat GPT launched, we built and launched this first AI music platform where you could just endlessly stream music generated by AI in specific artists voices. And this was like super early AI. It was super janky, but within a month we got 12,000 listeners and it's like people really—they were like, this is so interesting. This is super cool. We were getting bombarded with requests for these sorts of styles or whatever, and it was just super interesting. And I think that was a clicking point for me, which is like, irrespective of the medium, whether it's artwork, like imagery, text, music, whatever, that entertainment. And AI was just like, there is an intersection there that's really interesting and to pursue it further. So I think that was like a really powerful and proud moment for me.

TS: I also think it's just fun to see what other people have made. Oh, yeah, we have a gallery and so you can see all these images and all these creations that other people have made. And I don't know, I think it's fun to see what people are making with the site.

SR: Yeah, it's like you have a brainchild and you get to see it kind of evolve. It's so fascinating. And just other people creating stuff is just so much fun. And it's very motivating.

AB: That's awesome. And out of curiosity, does the AI like, music station that's curated, does that still exist in some form?

SR: It's live right now, so it's Quasi.Market/Radio I believe.

AB: Awesome.

SR: So you should be able to listen to it. It's still that very early version because we haven't touched it in a while.

AB: Okay.

SR: Because we built a lot of stuff, but it's kind of like a cool time machine to go back to, of like, this is where AI was, even.

TS: Though it wasn't really that long ago.

SR: It was not that long ago, but it's kind of like sat in time and it's just really.

AB: Yeah, absolutely. And I guess to close then, do you have any words of wisdom to any current makers and creators today?

SR: Yeah, this is a great question. I think for me, it's kind of twofold. One is just try to find other people that are also making and creating stuff. Because if you surround yourself with people that are constantly taking action, it's just so motivating inherently. Even if you're not building something, it'll make you want to build something. And I think being in the major community, it's like the best community. It's one of the coolest subcultures to be a part of because you get to see things that you never got to see before. So I think placing yourself in those situations is great. I think another thing, especially for someone that is not technical, doesn't know how to code, especially with the AI boom, a lot of people like me are very afraid of like, oh, I'm going to get written out or I'm going to get coded out.

I think there is so much value in kind of just knowing who you are, what value you add, and how you can still add more and more to it. So just like understanding what you're good at, what you're interested in, if you want to build something, keep building along those lines. Leverage this technology to help you accelerate that. I think that's just one of those things where don't ever be afraid of new and emerging tech. Just try to embrace it as openly as possible. Take the time to learn it. If it's not for you, it's not for you, but just give it an honest try. Otherwise, you never know, right?

TS: Yeah, I think I would say let your naivete lead the way. I don't know if that's a good thing, but I think when it comes to entrepreneurship, you don't know what you don't know. And nobody goes into entrepreneurship knowing everything, or else the business would be phenomenal. And going into business, it's sort of important to know that you don't know these

things, but doing it anyways, because no one's going to be 100% prepared. I have met a lot of entrepreneurs who are like, oh, I'll start a startup. I'll start a project once I'm ready. Once I am an expert in this domain. It's like, there's Ph.Ds who don't start companies. You can always learn more, you can always know more. But at some point, you just have to be like, I need to get started, let's get going.

AB: Absolutely. Well, I think those are all great words of advice. With that being said, thank you so much for sharing your thoughts and your story on the MakeYourStory podcast. We really appreciate it.

[00:26:32] Speaker D: Yeah, thank you so much.

[00:26:33] Speaker C: Thanks for having us.

AB: Thank you so much for listening to this episode of the MakeYourStory podcast. We certainly hope that you will continue to tune in to future episodes and certainly continue exploring more information about the MakeYourStory podcast. In order to access our website, please visit lib.purdue.edu/maker podcast. See you next time.