Swatee Surve 00:00:04 And I still kept seeing this problem, which was there was not any real solutions to help consumers manage their healthcare or manage their health. I still saw that as a fundamental gap as an engineer and what I've been working on, I kept seeing that it's not a technology problem, motivation issue, right? Cause it's not hard to get up and do 30 minutes of walking or drink your water. But it's the motivation. Well, what actually motivates people. And I started going down that pathway, asking these questions for myself, looking at research and what actually changed peoples motivations and to

Ryan Newman 00:01:01 This is dare to disrupt a podcast about Penn state alumni who are innovators, entrepreneurs, and leaders, and the stories behind their success. I'm your host Ryan Newman. And on the show today is Swatee survey in 2013, Swatee launched light Sprite, a health tech startup developing award-winning digital therapeutic purpose driven games for chronic conditions. Sinna Sprite, light Sprite's flagship, clinically validated mental health, mobile gain cost effectively transforms mental health delivery and outcomes. Light bright has the mission of destigmatizing mental health issues and removing barriers to the tools people need for their impact. Light bright has garnered over 30 global health innovation awards, including the first video game to receive a us surgeon general award strategic investors include Bayer pharmaceuticals, a a R P Tableau RAA, next cube and jumpstart Foundry Swatee received her MSME in control systems and biomechanics from Penn state and an MBA in finance strategy and entrepreneurship from the university of Chicago booth school of business. Sowati thank you so much for joining us. I'd like to start, as we normally do, which is really in the beginning, would you mind sharing with our guests where you grew up and where your early formative years were spent?

Swatee Surve 00:02:33 Sure. So I'm actually an immigrant. Believe it or not. A lot of people are surprised because I don't have the typical accent, but I came here when I was 18 months old. My father landed in O'Hare airport in Chicago and that's where I ended up growing up. So that's where my formative years were in the Midwest.

Ryan Newman 00:02:54 Very cool. And where are you from?

Swatee Surve 00:02:57 So I was born in India and a town called Baroda India, which is on the west coast for those who aren't familiar with, the geography it's north of, of Bombay or Mumbai north of Sur. It's a fairly small town relative to India, but subsequently in the years, it, it actually has a military base there. A couple of multinationals have manufacturing facilities there it's in the state of Gerath where the current prime minister was, uh, leading the, the state at the time before he became prime minister Nareda Modi.

Ryan Newman 00:03:31 So you come to Chicago O'hare, your father is, I should say, your 18 months old. And you start to spend your early years in the Midwest. What were those early experiences like? Did you have any inkling of what you may wanna do when you were in elementary school or into high school?

Swatee Surve 00:03:46 You know, I was always drawn to the sciences and biology. That was one I, I was just taken with just added and I also had just a natural aptitude. Um, if there is such a thing back then, at least they talked about aptitude and natural ability and, you know, I demonstrated a proclivity for sciences and, and math. So, and growing up, I was also exposed early on through different programs. I was a public school kid, obviously, you know, being first generation immigrants, we didn't have the luxury of private schools. Um, we didn't have that access in fact, to help me get a better education. We were in, in Chicago right off of Waveland avenue, um, for Chicagoans who know who, who know the city, that's where Wrigley field is. And my nursery school was literally behind Wrigley field. So I used to go to my nap time was with Harry Carey singing, take me out to the ballgame.

Swatee Surve 00:04:45 So, so about as American as you can get <laugh>, but the school system wasn't so great in the city. So they moved out to the suburbs as many families did around that time. And there were a lot of public programs to engage students in math and science even way back then. So I took my first programming class. I was like 12 years old and it was a summer program. And I learned how to code i --

-- n basic at the time nobody had personal computers at the time, just to give you an era set. It was the Commodor 64 era. It was the era of the Atari 2,600 programs sometimes were loaded on cassette tapes. Cartridges were a big thing. So that was kind of that era. And I started learning how to code through a, a school program, uh, that was sponsored by the school district.

Ryan Newman 00:05:40 So your undergrad, you went to university of Illinois, Chicago, uh, will get to your Penn state experience shortly here, but your undergraduate major was a BS in bioengineering instrumentation and signal processing, which was quite a mouthful. How did you decide to, uh, select that major in undergrad? So how'd you make that bridge from interest in the sciences and programming into bioengineering?
Swatee Surve 00:06:01 So, you know, it combined my interest of technology intersecting with healthcare. Cause at the time, you know, artificial hearts were there valves, you know, this idea of artificial hips embedding things into the body, it sounds kind of gross, but it was <laugh>. It was always, I was just really fascinated with the interdisciplinary nature of combining two very seemingly disparate disciplines. You know, they call that mashups nowadays <laugh> so I guess I was doing a mashup with my own education and that's what drove me to that. Plus I like, I like challenges. I like hard things. And that, that was a pretty intense curriculum. I think Chemmy outside of BioE Chemmy was probably the next, most intensive or most challenging undergraduate. So I said, I wanna push myself and learn certain things. And I also, this is also kind of counterintuitive. I wanted to show up a weakness. Like I wa math wasn't while I liked, and I was interested in math. I wasn't the strongest in it. My strongest suit was the life sciences or biology. Right. And so I'm like, okay, well, if I go do engineering, at least show up a weakness,
Ryan Newman 00:07:12 <laugh>, it's very impressive. Most people don't look to engineering as a way to show up a weakness. Uh, so I think really impressive. So after your undergrad, you find yourself, um, applying or getting a master of science and mechanical engineering in control systems and biomechanics from Penn state university. What was that something you did right after undergrad. And what caused you to go on to get that master's degree right after undergrad?
Swatee Surve 00:07:35 Yeah, so I, I was 20 years old when I was graduating undergraduate and I actually, I could have graduated high school at 15. Wow. But I just said, I'm not ready for that. I didn't want to accelerate my time outta high school. I couldn't imagine myself as a 16 year old going on a college campus. Like that was just terrifying. And I could have also accelerated my graduation of college, but for the same reasons, I said, okay, I, I wanna take my time, but I was still 20 years old. And at that point in my life, the idea of just going to work and, and in a nine to five job, I just could not imagine myself doing that. It just felt like, and the next thing I know I'd be like retiring and I'd be in my grave. Right. It just did not feel like that was a future if you will.
Swatee Surve 00:08:25 So I was trying to figure out what do I wanna do next? And I knew I wanted to learn more. And I was talking to some other alums later from my undergraduate. We didn't feel like the education we got. There was a strong engineering education. So I was looking for a strong engineering program and Penn state, especially in BioE was one of the best in the country. And the mechanical engineering was equally strong. So I've got three months before I'm graduating. I, I don't have a job lined up. I don't really know where I'm gonna go at this point. And I mean, literally this is what happened. I was walking through the electrical engineering department. There was a poster up on the, the bulletin board a page. And there was a little tear off about Penn state's engineering program. And at the time I was like, you know, I, I I'm in the Midwest.
Swatee Surve 00:09:17 I'm like, I think I've heard of this school. <laugh> right. Which is kinda funny. But I think I heard of this school. I think it's actually a really good school, better than the one I'm going. And I should like, think about this and apply. And at the time I was working in a micro electronics fabrication lab at my undergrad, I ended up, I actually had a fellowship there t
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-- o do so I could have, I could have also chosen to go and, you know, do microchip development. In fact, I ended up getting a paper published on etching of Silicon on, or the etching of Silicon using different substrates at the time. So I actually for went a fellowship in that area to go to Penn state. Very cool. And, and part of that was meeting the faculty, seeing what the program offered and what you would actually learn. That's what drove me to picking the school. And that's why I went to the graduate program. I felt like I would get a much stronger education and grounding in engineering principles that I didn't feel like I got enough of in my undergraduate.
Ryan Newman 00:10:21 So looking back on your time at Penn state as a master's student, what was one of your fondest experiences or memories?
Swatee Surve 00:10:27 So, you know, kind of back to that point where I grew up, it was an urban undergraduate experience. Right? So the one thing I remember, and, and I was just floored by how big football was, right. Like, I just remember like the, the, the beaver stadium, the first time we saw it and, and frankly, it's, it's big. It's, it's still bigger. The Seattle stadium I'm in Seattle now. It's still bigger than that one. Right. I knew about the academic program and you can kind of guess like, I, I like sports, but it's not my main focus. So I was just, and my parents too, as immigrants, they're like, this is for college kids. Like what the heck? See the stadium we drove by it. Cause I was actually very fortunate the year I was there. That was like the second time they went to the rose bowl for the championship. So I had a very unique experience in, in football and the games were incredible that team, I could see the performance of the team. Like immediately. You could just see how, how exceptional those athletes
Ryan Newman 00:11:30 Were. You graduate with your master's degree from Penn state, and then you go on and have a series of experiences in industry from Eastman Kodak to Nike. Can you talk about those early experiences and what led you on that path to, to work for some of those major companies that you did early in your career?
Swatee Surve 00:11:48 Yeah, honestly, it's directly because of Penn state and the reputation that it was bringing as an engineering program that opened up a lot of those doors initially. And so my entry into Eastman Kodak was because of Penn state, cuz it was a Penn state alum who was recruiting. As you can tell I'm, I'm not necessarily the most forward looking. I'm probably a little bit impulsive, more than most I'm thoughtful, but I'm also, I've got an impulsive streak. And so here it was, I was graduating. It's kinda a similar story. I'm at the end, I'm about to finish my, my thesis, I'm working on it. And someone randomly shows up and says, Hey, there's this career fair? And I'm like, oh, maybe I should start thinking about looking for a job. <laugh>. So I put on my interview suit and I went over to the hub where they were having this event and at and T was there, Ford was there, Eastman Kodak was there.
Swatee Surve 00:12:44 I met a bunch of people, talked to them and then it ended up being a choice between my dream job, which was at Ford. And at the time I wanted do car crash testing. So I got an offer to join Ford in their biomechanics lab was my dream job thing. I was like, wow, that would be so cool to do. And then I got the, another one with Eastman Kodak, but then I went up to Rochester, New York and they gave me like this three day tour of all the research labs. And, you know, as an engineer and as someone who loves science, I was like, wow, I was totally blown away. I was blown away by Ford cuz they were doing all kinds of crazy things at VR and you know, testing cars and drive trains and everything. But then Kodak was just a whole nother world. It was like, my mind was blown and I'm like, okay, this is where the future was gonna be. And at the time Kodak also had their diagnostics division or they're doing blood analyzers and stuff. So it was more aligned in a way with the bioengineering, they added whole health imaging unit with x-rays and digital imaging. That was more in the healthcare space Ford. It was just much more narrow or much more of a niche also, not just to mention from a pure technology play.
Ryan Newman 00:13:57 And so you have this experience at Eastman Kodak, you then go on to have another number of other experiences at Ni --

-- ke and Microsoft, but eventually you find your way back to university of Chicago getting an MBA. Can you talk about the decision that led you to ultimately pursue an MBA?
Swatee Surve 00:14:12 Yeah. At the time this idea of startups was fairly geographically concentrated in Silicon valley, right? So at the time the traditional pathway was if you wanted to stay in a corporate role, the next thing would be to get to management. And an MBA was a way to broaden your skillset, get like training or exposure into general management skills. And so while I was at Kodak, I started looking at different programs. I wanted to do it part-time for me, I felt like after going through and taking a class at night while I was working, I found that that combination worked really well for me because I could take what I was learning and apply it into a real world setting immediately. And that would actually help me retain concepts that I was learning for. So I was trying to, I was looking at the strongest programs in MBA schools that I could finish while I was still working.
Swatee Surve 00:15:08 And I ended up honing in on Chicago because Chicago, they had the weekend program. It was very well established. They had all the logistics. They even had like shuttles that would pick students up from the airport and drive them over, like for classes in the morning and concurrently, I had been doing work at Kodak. So my role at Kodak was looking at innovations and new, new Greenfield opportunities for applications of imaging. You could say I was an entrepreneur in residence. So we were part of an internal incubation group. It was planned Stein. Most of the executives didn't know we existed. They hold us away in a building that in the sixties and seventies is where if you dropped off your film, that was the building. It would go to get processed. And what that means, cuz it was film is there were no windows. So it was one of these top secret labs.
Swatee Surve 00:16:02 And I got to determine what I wanted to work on and I determined. I wanted to look at again, back to that whole mashup idea. I wanted to look at how you could apply technology to help consumers deal and improve with their health. Cause at the time all the technology was on the enterprise side, it was hospital systems. It was EMRs, which were very poor to imaging systems to diagnostics, right? Like very, very corporate centric, very enterprise centric. I wanted to work on technologies that patients could use for themselves today. That field now it's still only about 10 or 15 years old, but that today is called digital health. I was working on this in the early, late nineties, early two thousands. So I was looking at those areas. I wrote several patents in that space. I was looking at the use of imaging to help the stress management for example.
Swatee Surve 00:16:54 So the idea was, is Kodak had this plethora, as I mentioned, they had a plethora of technologies, organic LEDs materials optics, right? How could you use that core technical cap capability and create brand new businesses off of that? It was a playground for an engineer, right? And it was a hundred engineering imaging scientist. I went through their whole imaging science program. So technically I'm an imaging scientist. And the idea was is that the company knew that they were gonna get disrupted. They knew I was part of the group that was tasked to give the company, the foundation to transition into digital. And so because of that work, I got into wearable technologies back that that caught the attention. I was touring the MIT media lab. Kodak was one of the founding members of the media lab. Um, and I met folks at Nike there and I was only about a year or two into my role at Kodak and I got an invitation to join.
Swatee Surve 00:17:54 And I, again, I'm just like, I'm not ready for this. This is not the right time for me personally. And then about a year and a half later, I call, you know, and I obviously I kept in touch with the guy I'm like, what are you up to? Right? Like what are you doing? And, and at that point in time, I was ready for a move. I was itching to make a change. I was ready for a challenge. I felt like I could hold my own in a place like Nike. And so then I got recruited, um, to go to Nike and it was all the fundamental engineering principles, systems, level processing, thinking that allowed me to navigate, um, both of those roles.
Ryan Newman 00:18:32 I wanna advance ahea --

-- d to your founding of light Sprite. Can you talk about what was the business problem you were setting out to solve and tell us about the business?
Swatee Surve 00:18:41 Yeah, it's interesting. Cuz I did get my first exposure to gaming and, and healthcare. When I was at Kodak, ironically, it was here in Washington where I'm at today in Seattle, there was a group called the hit and they were doing VR in 2000. They had built a video game that could help burn victims, reduce the amount of morphine they needed as part of their recovery. And it was like, well known in the gaming space. It was called snow world. And I was like, oh, that's gonna be it. That was like, what 2000, 2001. And then flash forward to in 20 13, 20 14 nothing's happened. And I'm just like why? And I still kept seeing this problem, which was, there was not any real solutions to help consumers manage their healthcare or manage their health. I still saw that as a fundamental gap as an engineer and what I'd been working on, I kept seeing that it's not a technology problem.
Swatee Surve 00:19:50 You know that back to that system level, thinking the critical root cause analysis, it's not a technology problem with the motivation issue, right? Cause it's not hard to get up and walk and do 30 minutes of walking or drink your water. But it's the motivation. Well, what actually motivates people. And I started going down that pathway, asking these questions for myself, looking at research, reading it and, and, and what actually changed people's motivations. And one of the things the drivers or a platform to do that was games very effective in doing that as evidenced by snow world. But then there was also remission, which was a cancer game for kids that hope labs did. Those were some of the early ones. But then at that point in time, by 2012, there was a body of evidence that was showing that gaming could actually improve health outcomes and drive it.
Swatee Surve 00:20:44 And so I'm like, okay, there is an actual market opportunity here because there aren't a lot of commercial solutions, but you're showing efficacy because one of the important things, especially in healthcare, at least for me, is that if you're talking about having an impact, it has to be an impact that a clinician or the, a healthcare professional is going to recognize. And so that's what made me launch lights bright. Um, cuz I hadn't seen really too many platforms or individuals really trying to commercialize. There was a lot of gamification. Okay. And, and that's very different than building a full game. And I was trying to push towards that and you'll see a lot of applications of gaification even today. And, but what we're doing is we're building full experiences rather than taking gaming elements and applying them to non gaming scenarios.
Ryan Newman 00:21:35 Can you talk more specifically to you about this idea of designing a full game and gaming your health versus game gamification?
Swatee Surve 00:21:43 Yeah. So a game, if you think about it, you know, even something as simple as go fish, right? There's there are rules that you have to abide by. There are things you can do. There are things you can't do. Uh, there's a beginning and there's an end. Um, and so a game is an experience that takes the player through a journey. If youll it's a process, it's an experience. Whereas gamification is the idea of taking game account act like the leader board or badges or progress bars, right? And then applying 'em to a non-game scenario, point systems, point systems are very, that's a, that's a gamification mechanic. It has no relevance. There's no tie, there's no context. There are no characters. There's no story there. Which video games these days, you know, I used go Phish as the previous example, but video games these days do have that there's character, there's narrative there, their story, there's an emotional component. And that's a lot of reasons why people play games today. So that's, that's fundamentally the difference. And that's what our players say actually with the game, they're like, this is an experience. They call it a game. They feel like they're on a journey. We have a character, a little Fox character. So to Fox SOS is actually a really critical piece of that journey for a patient and helping them heal. And that's what our players talk about. So, so that's the difference.
Ryan Newman 00:23:08 And so it's hard. What is your go to market strategy for --

-- light bright? How does, how does light bright actually get customers and what is the way in which you're essentially interfacing with your customers?
Swatee Surve 00:23:20 Yeah. So our go to market has always been enterprise, unlike most digital health or startups that you see. And, and it actually takes people by surprise from the beginning as part of my testing of go to market. Well, first I had to figure out, well, are we a healthcare company or are we a gaming company? Like again, one of the challenges when you're doing these kinds of mashups or interdisciplinary, it's always people will wanna put you in one bucket or another because that's what they're used to. But then also, and that also fundamentally changes your business model and what you're gonna pursue over time. It became evident that we're more of a healthcare company than we're a gaming company. Right? Cause our ultimate objective was to improve health. I can say this now, but at the time I had no clue. So then if you think about healthcare, you have to really think about how healthcare is monetized.
Swatee Surve 00:24:09 It's one of the few places where the end user does not pay for the service that they consume, right? It's a very complex economic model. And typically if you look at how it's monetized, it's usually enterprise. What we are also seeing from the market is we were getting signals early on from insurance companies and hospital systems. At least at that time that this was something that they would be interested in. And we were getting pull in, clinicians are saying, Hey, when is this available? I'd like to give this to my, my patients. And so we started very early on as an enterprise focused play. Now post pandemic, we started seeing inbound requests from employers and, and as a result, we shifted and pivoted our go to market to a different enterprise customer, which is now employers because the mental health crisis has just the pandemic has already exacerbated it. And it's also just made it that much more apparent how imperative it is to address these issues and employer cause employers are now feeling the brunt of it.
Ryan Newman 00:25:13 And so in terms of how your game works with employers, can you talk about that? Because when you describe the, the Fox and the storyline, you know, of course my immediate reaction is that that's a game design for children. Obviously if you're dealing with employers, it's working with adults as well. Can you talk about the application of the game as it relates to adults?
Swatee Surve 00:25:32 Yeah. So we actually designed it for an adult woman. You look at the data, the core gamer today is women by the electronic software association and a variety of program. Right? And the biggest platform is mobile, not consoles and consoles for the last couple years, year over year console units have declined. Also a client also games as an industry is larger than movies, revenue wise. So when we were building the game and I was like, okay, chronic condition management, that was a whole nother thing we could even get into. I chose when I was looking at games, I was also looking economically, where is the cost? Where is the highest cost individual in the system? It's people with chronic conditions. And there's a lot of complexity around that. Right. And so that's why we went after that. And then when we started doing interviews with insurance companies and people there, well what's the biggest unaddressed need mental health.
Swatee Surve 00:26:33 Even back then, it was like have three or four places where the highest utilization was. Right. But it was also the place where there was the lowest deployment of technology. Right. So, okay. Who actually has the most diagnosed? I there's a whole nother issue about diagnosed versus undiagnosed, but if you look at least what the data was available, it's women had a higher propensity. You could argue it's because they're more apt to get care or they're more willing to say I need help. So when I start looking at that, I say, okay, well, if it's women, what do they play? Do they play games? Yes. And do wear mobile games. And actually they're the core gamer these days, a woman in her thirties or forties. So that's what we designed the game for. What we ended up finding though, is that we had brought appeal. We actually had individuals, men and women up to 65. And I believe we're probably like, uh, 60, 40 split in terms of demographics, you know, 60% women, --

-- 40% male. And then with the pandemic, we started seeing a younger audience adopt and then we've even seen kids as young as three or four adopt the solution. Cause they see their parents playing on the phone and then they're like, well, what are you doing? And then they wanna play.
Ryan Newman 00:27:51 So, and the game itself is, is it called SinaSprite?
Swatee Surve 00:27:54 Yes.
Ryan Newman 00:27:55 And what is the benefit of the game or as a user interacts with the game? What is the desired outcome?
Swatee Surve 00:28:00 Sure. So the premise of the game, there's several objectives that we're looking at dealing with or addressing the first and foremost is to support them and improve the symptoms of anxiety and depression. And so we use generally accepted scale in the us, right? They're different scales, but in the us, they use the GAD seven or a permutation of the GAD, which is generalized anxiety disorder, screening tool for anxiety. And then there's the PHQ scales and that's for depression. So the first and foremost is we're measuring to see if we can actually move the needle on improving an individual symptoms. The other thing that the game does is it improves access to mental health because it's an format that's very easy to use nowadays. You know, everybody has phones, but it's also presenting skills in an interactive fashion. So it's teaching skills in interactive way. And we as people, someone who, you know, I hear this time and time again, you don't talk to me about these skills.
Swatee Surve 00:29:05 You don't talk at me. You just show me what I need to do. You walk me through the experience and you don't tell me, this is what you're doing. You just step by step, do this, do this, do this right in a very interactive way. And it allows an individual then to take it's a player driven world exploration game. So, and an individual can take their time, explore what techniques will actually work for them. Cuz we present a range of skills. We don't focus on one. And then SOS, as I mentioned is an important part of the experience where SOS is part of that healing journey as well. When you're talking about chronic conditions, whether it's it's a mental health challenge or you're dealing with cancer or diabetes, there's still an emotional component that many other experiences, because they're not in, in the format of a game, can't really do with any real point of authenticity or substance in or in a real substantive way.
Swatee Surve 00:30:04 But we can. And that's why we've been able to also reach individuals that have fairly complex cases, cuz we've been used in clinical settings with individuals who have suicidality, who are also concurrently going through gender transition and you know, issues with pornography. For example, there was one that we were working with. Another one was being seen at Mount Sinai in, in New York and the clinician offered this to them. And this is an individual who would not talk to somebody did not like talking to people, was also going through gender transition and also had a very, very unstable family life as a result. So we're actually able to reach some individuals that are, are really truly at vulnerable points in their lives. You know, I got a report from a woman in the UK where her daughter, it was during the pandemic, they were still in school and her daughter suffers from debilitating anxiety attacks and she had one and normally those attacks happen and they're so bad that the mom has to come pick her up. And she had one during finals and it was so bad that she ended up in the bathroom and she's like, mom, cause, and this was one of those instances where her mom was testing it out. And the daughter's like, well, what are you doing? Mom's like, I'm playing the skin. You wanna try it? So daughter's playing it. And she's like, mom, I, I had a panic attack and I, I pulled out the phone and socks was with me and walked me through the panic attack. And I went back to taking my finals.
Ryan Newman 00:31:37 Amazing. Well it's moments like that. I'm sure S that make you really feel like you're doing something special and having tremendous impact. Sowati talk to me about, you know, you've got the game on the front end, but on the back end, I assume you're collecting all of this amazing data. Can you talk about any discoveries you've had with the backend data in relation to the game itself?
Swatee Surve 00:31:58 Yeah. So that was the other componen --

-- t of it. So it's not just like, as I mentioned, we're measuring these outcomes, but if you're really trying to improve healthcare, you also need to involve the clinician. So the other component, which is equally important is our games collect these really important data points and actually very unique data points that then clinicians can use to remotely monitor patients where actually right now, part of the IBM mass challenge AI cohort for this year, and we're working with their scientists to see, can we identify biomarkers or build up a model that can be used for identifying potential suicide risk? And what's super interesting is I was reading an article to tie it to some more current events. There was two researchers that have somehow identified the profiles of, of a potential mass shooter. One of the things they said with the younger mass shooter is they typically have a cry for help.

Swatee Surve 00:33:06 It's actually a mass shooter is more about suicide. It's not about them observing control. It's not about an evil terrorist. It's someone usually when they're younger, they know they're gonna die. They want to die. And they've had multiple suicide attempts prior to them actually going into the school or doing any kind of mass shooting. It was very interesting article just two to two or three days ago. So you can imagine if you have a tool that can remotely monitor someone and even give them help and not just monitor, cuz there are a lot of monitoring tools, but they don't actually give any utility to the end user. Right? Which so then as a monitoring, they're useless cause no one's gonna use it if they're not seeing value. But if, if you actually can help someone and move the needle, they're gonna use it more. You're gonna get high quality data.

Swatee Surve 00:33:52 You can use that now to build a, a remote telemetry and allow you to start reacting in advance right ahead of time before any kind of tragedy for the individual or the community before that happens to the individual or the community. So those are the kinds of things where the data becomes powerful because we literally, like I mentioned, if you know those, I I've mentioned similar patient scenarios, they're journaling, right? When they need help, I've literally had people leave reviews, saying you've saved my life multiple times. Then you begin to get an insight of what's actually troubling in someone. What's the environment that they're in. You know, what time of day are they journaling? What are they journaling about? What are the categories? And we can actually highlight or, or bring to bear a, a subset to employers for example, which is also really important for them because they have no way now with the new hybrid work environment to really get a pulse of what's happening with, with their employees anymore. So now they need new ways to remotely monitor their employees.

Ryan Newman 00:34:56 How pervasive is the app today and what is, what holds, uh, what's in store for the future of light bright.

Swatee Surve 00:35:03 We've got most of our users through word of mouth. We haven't done a ton of advertising. And I think it goes back to that because it's such an appealing format, right? It goes back to that, that thesis I had of behavior change behavior change has to be something you wanna do. It shouldn't feel like work. And the experience itself should be very simple. Ours is so simple that I can literally get three year olds to sit in front of a screen and meditate like thats simple. And I've seen it. I was with my CFO. He had a three year old daughter. We were having a business meeting that went two or three hours. He just gave her the phone and she just sat there and meditated for hours, right? Looking at the screen, doing the breathing exercises. It needs to be that simple if you're trying to drive behavior change. So where we're trying to take the business now is, um, we're looking and are open to organizations that want to help their employees, their patients, or their members improve their mental health. So we're looking to work with employers who wanna do that. We're looking for providers as well as payers who are looking for unique solutions, that they can have peace of mind and trust that an end user can use to improve their health.

AD 00:36:20 The Penn state office of entrepreneurship and commercialization leads the university's entrepreneurship and economic development programs. This includes the mana

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-- gement of the university's startup portfolio, the development of programs for the launch box and innovation network and administration of the invent Penn state initiative to learn more about the office visit Oec.psu.edu.
Ryan Newman 00:36:48 Swatee is it fair to say that anyone that any individual that may be listening that wants to try the game the best way to be able to access it? I presume would be to convince their employer or an enterprise with which they're associated to essentially pay for a subscription to then offer to their users. Is that the best way to go?
Swatee Surve 00:37:06 Yeah. The way works, we have a free version that anybody can use and that's part of our social mission to make mental health accessible. And it's also how we've been able to do our publications and get the peer review because we use real world evidence. So another thing is quite often a solution may have like the clinical efficacy, but it's in a lab. This is real world evidence. People downloading an app and how would you use it? So we have a variety of metrics that we can track. But part of that is just making sure you'll always have some place to go, to get some help. If an employer wants to integrate it, we offer that. And we also offer, as I mentioned, a certain level of data reporting back, it's all anonymized, it's private an employer, doesn't see who's doing what, but for example, one of the things we give them is the categories that people are that is most top of mind.
Swatee Surve 00:37:55 And that allows them to either bring in new services to improve the employee experiences, support them, or even highlight services that they already have that employees may not be aware of. And that's really important for employers because they are in a position right now where the, the demand and the ability to attract top talent is really important. And a big key to that for a lot of people is a good company culture. We're enabling that for employers so they can reach out to us. If you're interested, I can get you in touch with our team. If a provider who is looking, there are a lot of providers doing telehealth. And if they're looking for complimentary services to allow for more data to their providers and you can also get reimbursed. And then for any insurance companies that are working on health equity, we've done a lot of work with the underserved across the country and we've demonstrated strong appeal and clinical outcomes with the underserved. So we're open to, to having conversations
Ryan Newman 00:38:54 What's really striking, uh, is that you think about your background, you think about coming to this country and more importantly, your tremendous ferocity with which you approached math and science and engineering. And in some ways you were doing pursuit of all these technical things, but ultimately what you've created is a product and a service that provides helping people emotionally and personally. And I it's interesting juxtaposition, given your strong technical background, leading you to helping support someone emotionally,
Swatee Surve 00:39:28 I think I have to really credit my parents cause I'm, uh, a mut between the two of them I'm right in the middle. So my mother is, she did science and biochemistry. So she's the scientist. She would show me the information, show me the data. My dad's the architect, he's an architect. So space design. He'd always tell me my PowerPoints he'd look at him. He's like, there's too much stuff on there. <laugh> like get rid of all that stuff. Right? Uh, visual, emotional, very emotional. So I'm the blend of Bo. And I will also say my time at Nike really helped me gain an appreciation about emotional motivation and what it can do. Right. My own personal, uh, just corporate experiences have driven, driven that. I think just naturally as you can see, I love hard problems. So it's the engineering process, the mindset, which has helped me think through rationally, but then also being open to the solution. The solution needs to fit the problem, right. And, and being comfortable going there. And I don't think people realize how technical I am, cause I don't necessarily come across that way. <laugh> when you're talking to me, but it's a very difficult challenge.
Ryan Newman 00:40:54 Well, thank you Swatee for taking time today to share your entrepreneurial journey with me. Now, I'd like to hand things over to a current Penn state student who is in the midst of his own ent --

-- repreneurial journey and is very active within the Penn state entrepreneurial ecosystem. Jeff Brozena is currently a Penn state graduate student in informatics. He is working on an app to help identify personalized early warning signs in financial data from individuals with serious mental illness. Jeff, I will now hand the interview over to you.
Jeff Brozena 00:41:26 Thanks so much, Ryan SWAT. It's really great to be here with you like it. Uh, I appreciated, appreciated so much about that. I think as a fellow systems thinker and probably a fellow, somebody, I, I do value emotional intelligence. It was such a pleasure to listen to you balance between the two, uh, quite elegantly. I think. So my first question to you, I'm actually curious if you could say a little bit about how you spoke a little bit about us healthcare, the economics of it in a couple different ways. And I'm wondering if you could talk about how the relationship between clinicians in clinical settings and digital health products and maybe even specifically digital mental health, if you can, how that relationship has evolved throughout time and kind of where you see it going, especially in light of like the Ima AMAs, uh, digital medicine, payment advisory group, things like this.
Swatee Surve 00:42:14 Oh yeah. And Jeff, you are just carrying the tradition of super bright, super thoughtful, engaging questions. Like I would not, I would expect nothing less from a Penn Stater. So it's, it's very interesting because I remember bringing, you know, it's funny when I was starting this, when I started light bright, I originally thought that I would get a lot of pushback from clinicians. I thought they're not gonna go with this because by this point I had worked in at Kodak and I'd, you know, done a lot of healthcare stuff. So it was not a new space for me. Right. Like this was kinda me going back to my stomping ground. Um, so, so I was actually surprised when I started hearing clinicians saying, oh, can I have that? Can I use that for my patients? Mm-hmm <affirmative> and maybe that's because there was such a, a lack of technology in mental health specifically, right.
Swatee Surve 00:43:16 I mean, and there still is right there. There's still such a provider gap. Right. And you're not going to be able to hire your way out of that problem. So the individuals were very, very open to it. But what I was finding is that it was the organizations that were having a hard time adjusting. That being said, there were also some clinicians I would get introduced to and they just would be like, why would I even do something like this to abject fear? Right. But, and I was expecting that I wasn't expecting there was already a group, um, of individuals ready in wanting to adopt any, any time you're building a frontier technology. Like the ones we are it's the default is you have to assume, no one's gonna like your product or is going to push back. Like that's the default, if you're innovating.
Swatee Surve 00:44:08 And that's what people don't understand sometimes is innovation's hard because you're driving behavior change in that respect. Right. So based on what I had seen, I was expecting that I was actually surprised to see the uptake, that there was a community.
Cause that's the trick is you have to see if are there early adopters, but then on top of that, I've just seen the interest grow and the pandemic has certainly fueled that and the need. And what I'm now beginning to see is that it's not just the individuals, but now organizations are really looking for tools because they've realized they cannot hire their way out of this problem. So that's the shift and change that I've seen as I've started.
Jeff Brozena 00:44:51 That's great. Thanks so much. Um, my next question is maybe a little more specific. What's one metric you would've included earlier in the design and development of your products and if not a metric, maybe one thing that you wish you would've known earlier from the use of it.
Swatee Surve 00:45:17 That's a good question because a lot of the work we've done, um, has actually been setting standards on what metrics you should collect. In fact, I wrote there's an upcoming standards paper. That's coming out from the consumer technology association and I'm on actually on the standards committee for mental health tech. And I wrote the metrics section. So it's a good question.
Jeff Brozena 00:45:41 It's lucky. It's good to be here w --

-- ith you. <laugh>
Swatee Surve 00:45:45 Well, I mean, this is another thing right? In the field of digital health, so many solutions and I really drive this and part of this is that engineering piece. You gotta show what, what needle are you moving? And what are you actually measuring? And how is that related to a person's health, right? That's a of metrics. We collect freeform unstructured data, but then time stamps categories, the type of activities somebody's doing, we have a gratitude mini component. Um, so even gratitude, we actually collect audio, video and text through that channel, which can also, the metadata could be mine. There's a ton of stuff that we collect, I think, and this is the harder part, collecting more of the demographic information in the details. And it's a balance because as a, if you're keeping something open to gain trust, you can't be too invasive in asking those questions.
Swatee Surve 00:46:42 When we are in the beta phase, we're asking questions like, are you on medication? What medication are you on? Have you, are you in therapy currently? That's the type of information I would really like to know, but it's also really hard to collect unless you're like a more of a provider setting. Right. And certainly in an, in an employer setting, no, one's gonna answer that. Right. And I don't know at this point what additional information I'd want to collect. Cause right now here's the other thing critically asking, do you need to collect anymore information? Do we actually cause more information is also not a good thing. You end up with an information problem. And the reality of it is clinicians are already overwhelmed. They already have too many things to do. The question is, is can using that data, that you're, how do you create actionable insights? And that's really the important piece. So I don't necessarily know if we collect anymore. And in fact, most of the data we collect, we don't even actually share with clinicians. We ask them, what do you want to see? Right. And then we try to work backwards. We try to do some intuition around, cause it is first of kind, it's brand new data. Nobody knows even how to use it in care. Um, well what could be potentially useful for them? Cause we're not gonna show them everything
Jeff Brozena 00:47:58 Soy. You, you spoke a bit about the importance of understanding motivation, uh, in behavior change and also kind of being empathetic towards users of potential products or incorporating behavior modifications. How have you been surprised in as a first mover in this space as users have communicated their motivations to you?
Swatee Surve 00:48:22 So the thing that I'm most surprised about is how important addressing the emotional connectivity and support was. And in hindsight, it's kind of 2020 cuz most digital health solutions do not focus on the emotional wellbeing of an individual. And through that extent, how important SOS was, it sounds kind of odd and it's whimsical for some, but for some are a bit condescending about it. Like, you know, it's childlike. Why would an adult ever do that? But if you actually think about it from a patient's perspective and I've talked about this before, a patient is compromised, they're physically compromised, they're emotionally compromised, they're financially compromised. You can't expect somebody in that kind of state and all of us, by the way, have been that way for the past two years.
Jeff Brozena 00:49:12 Mm-hmm <affirmative>
Swatee Surve 00:49:13 You can't expect someone like that to be highly functioning. So meeting them where they are. And part of that is giving the emotional needs space. There's no place for these people for their emotional needs. So, um, the experience and the way we've built it out, along with having elements that allow for people to be emotionally vulnerable was one of the biggest surprises.
Jeff Brozena 00:49:40 Wow. So I think it was fascinating to listen to you, describe your relationship to readiness in your career, as you were looking back in hindsight, can you describe a little bit about your relationship to readiness across time and maybe being able to spot opportunity in terms of serendipity or maybe what you called impulse, which I really loved hearing. Can you talk a little bit about how you've come to understand readiness in your own career?
Swatee Surve 00:50:06 You know, readiness is a combination of a couple of factors. There's the doing your --

-- homework, right? And you kind of heard me talk about that, doing the research, reading the relevant publications, um, looking at data, but you've also heard me talk about was I emotionally ready myself, certain instances through the podcast? So readiness is a couple of things it's about not just the, the numerical or the empirical evidence that there's a time to be ready, but then are you also emotionally available for that change as a person, right? From a business opportunity perspective, it is really about looking at those market signals. Is this the right time? Are you too early? It's not necessarily a good thing to be early like us, or do you have the capacity to whether what it's going to take before an idea holds if you're early, is the idea late or later, I should say. Cause sometimes it's not necessarily a bad thing to be later. Microsoft, for example, has famously pursued a fast follower strategy and has done incredibly well. So market readiness from a business perspective is just understanding where are you on that continuum? And do you have the resources, um, at your disposal, financial, emotional infrastructure wise to be successful on the stage you decide to enter

Jeff Brozena 00:51:41 About the survey. Great talking with you. Thank you so much for that thoughtful response.

Ryan Newman 00:51:50 That was Swathi survey founder of light Sprite. If you haven't already be sure to describe, to dare, to disrupt wherever you listen to podcasts and look out for next month's episode. Thanks for listening.

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