>> Hello everyone, and welcome to the Markets for Good podcast. My name is Andrew Means. I am the head of Beyond Uptake, the philanthropic [inaudible] and the cofounder of the Impact Lab. Today with me, I have Jake Porway, the founder and Executive Director of DataKind, a nonprofit based out of New York. Jake, thanks so much for joining me.

>> Thanks for having me Andrew. My pleasure.

>> Can you tell a little bit about DataKind for people that are unfamiliar with you guys?

>> Absolutely. DataKind is a nonprofit. It is dedicated to harnessing the power of DataKind in the service of humanity. [Inaudible] trying to get data and machines to work for social good. And where the big challenge that we saw out there is that there is so much data that's out there these days coming up. Cell phones and laptops and sensors that could be used for social impact, but the vast majority of resources [inaudible] that are in Wall Street and Silicon Valley helping people write apps and get cards and bring you feed faster. And so we're just asking what would it look like if we could take the same algorithms that are boosting profits and Silicon Valley and bring them instead to the social sector [inaudible] social impact. So that's pretty much what we do, and we do that by bringing in pro bono volunteers from [inaudible] companies like Facebook and Google to work alongside those [inaudible] International and other social organizations to do things like monitor the spread of weak diseases from [inaudible], or help automatically route [inaudible] prices to the most [inaudible]. So that's pretty much what we do, and we are very excited to see a world in which DataKind and technologies are collaborating with the social sector to make more good.

>> Jake, you and I have had lots of conversations around that division. As a more data-driven sector, where the use of data is infused in everything that we do. But when did you first realize that you could take your training as a data scientist and use it to solve social problems?

>> Yeah, I guess it's so funny having a podcast version of this conversation with you Andrew because you and I have come from very similar paths [inaudible] and is actually having this conversation conversationally. So I don't have [inaudible] converted, but I think it's also why I like having this conversation so much. To your question about how [inaudible], you know, I certainly wasn't alone in this, but I think probably the story I most often tell is that I'm going to a hacksaw, so one of these 24-hour events where a bunch of coders and scientists get together and does come up with every cool stuff they can. And most of the time, they're just coming out with this parking app or some new – I don't know, a new application that they might be able to make money off of. I kind of realized as I was sitting there that the people around me were fantastic machine learning experts from Google and scientists from NASA. And I thought, man, what could we do if we could just put these skills [inaudible] to actually hacking on helping someone find clean water. And I actually got very lucky soon thereafter to be

at one of these sort of gatherings, when a woman came in and said, "Hey, I have data from a number of health clinics in Uganda. I don't know what to do with it. I'm not sure if it's even legal but I have it. Here it is. What could I do?" And maybe 20 minutes, a couple of data scientist and data developers sat around and said, "Oh, with this data you can predict this and if you wanted to see things like patient return rates and how doctors are doing, you could see that." And you could just see her eyes light up, both from the fact that she realized this was possible she was getting helped but also just a realizing what data science could do. Not just data and reporting or data looking in the past and say, "Hey, I need to tell my funders how many people that I actually serve," but saying, "Hey, we could feed the state into a computer and it could predict for you that this person needs an intervention." It could show you a [inaudible] big pattern you could [inaudible]. So I think that was really the moment that I said, "Hey, there's potential here. And then we actually ran a kind of social impact [inaudible] we called a daily [phonetic] dive, and the number of data scientist who came out to work alongside nonprofits that they wished, and so huge and the results [inaudible]. Oh yeah, this is absolutely a possibility and it was just really nice to see how I was the only one who was realizing it.

>> You know, it's absolutely true, I love that story of the woman realizing that she could do more than just reporting or evaluation with her data, but she could use it to actually inform the way that organizations work. And I think that a real fundamental shift that's occurring in the sector, I think a lot of the ways that people traditionally have used data, the nonprofit, is, you know, I was [inaudible] in the accountability and reporting side, so telling your donors that I didn't run away with your money [inaudible]. Like let me prove to you that I spent your money towards this intervention and then evaluation, which is, you know, let me tell you the ideal potential results, like what may be happening because of the work that we did. But we forget that we can have this entire predictive or prescriptive and tool based use of data where it actually changes the way that we operate and change the way the way that we work and how we provide intervention. And that really is the fundamental shift. So what are some of the challenges you faced in trying to help nonprofits utilize data science well, and think about data in terms of prediction and prescription rather than just accountability, reporting, evaluation?

>> Will come I think – You're starting with exactly the right thought in terms of the biggest hurdle. I know we've talked about this ourselves. That's probably the toughest challenge for us, is just understanding the power and the pitfalls of what data can do. And I often use – I don't know [inaudible] alienating [inaudible], a phrase that I've been using is data for human interests and data for machines. Probably [inaudible] terminology but [inaudible] we try to get at is that the key to [inaudible] using data for [inaudible]. Someone expects to show another person some data to get them to change their behavior [inaudible] like you said. We evaluated this program and this woman [inaudible] so we should do more of it, or even someone tried to show some polls for some data they found and said, "Hey, look at this. The police are stopping [inaudible] many

people, therefore you should do something." That's what I believe that data as the real centerpoint and as if it's information, true fact. And that's super important. And [inaudible] that reporting and accountability. We're not going to get away from that, but [inaudible] can't believe [inaudible] is that people don't really make decisions always based on non-data. In fact, I thought the study that showed that if you believe something strongly and someone showed you a study that [inaudible] undermined what you believed, people surveyed often believe their previous point of view more strongly. Check me on that, [inaudible]. It certainly is not always easy to convince someone with just data. And really, the power of data for, like, [inaudible] machines and picks away from the data as the [inaudible]. What you're trying to do the end of the day is run faster, more efficiently, learn something new, and it would help the computers and computer modeling or predicting from previous behavior, what will happen but tomorrow. Well there, you can make a lot of progress because you are not necessarily trying to change someone's mind or change a culture or say, "Hey, you really should deploy more resources to your homeless shelter because it's predicted you're going to get double the intake tomorrow." People are pretty [inaudible] but they want to solve that problem. They just don't know what they're supposed to do next. So that's really why I think that whole predictive and prescriptive piece is so powerful. We spent a lot of time with partners just showing case studies in what possible [inaudible] those people [inaudible] in nonprofit sector, though still have experience with [inaudible]. Or the long way [inaudible], yeah.

>> No, that's absolutely true. I think people don't realize all the [inaudible] which is possible with DataKind, because it can do these things that seem like magic, right? It can help a hard drive and it can tell you what movie that you want to see. It can view all of these things that seem magical, that seem maybe even possible but yet it cannot do magic and it cannot do the impossible. There is a line. It's like, "All right, DataKind can do this but can't do that." And identifying that line I think is a challenge sometimes, and it requires a level of experience and pattern recognition and those are two important concepts that I think many nonprofit leaders haven't had. They're coming from a different background, and that's why I really do appreciate a lot of the work that you're doing with DataKind, trying to breathe more of that exposure to people, and that's what we're trying to do with Markets for Good and that [inaudible] is to really help people understand what really is actually possible. [Crosstalk].

>> Oh, I'm just going to pull some [inaudible] something out that you said which is the flipside of that coin. People thinking it can too much. So we get a lot of people coming in and saying, "Hey, show me that I have impact," or "Let the data prove to us what we should care about." You know, that's actually another side of the coin. Actually data can throw a question for you or show something to you that they didn't see before [inaudible], but at the end of the day, you need to be clear about what [inaudible] yourself.

>> Yeah, there's still a role for you as a person, as a human, to play. It's not

[inaudible].

>> Yeah, exactly.

>> Data is a supporting [inaudible]. Exactly. Like there's visions of computers taking over the world and driving our cars and [inaudible]. I know humans are the critical piece of the process. So I think that's beyond [inaudible] of literacy, yeah.

>> Absolutely, I think you're absolutely right. So what does the future look like? What do you hope this sector looks like when it comes to the use of data in five or 10 years?

>> I believe [inaudible] don't have to be [inaudible] necessarily. In which case, I would love to see nonprofit leaders put a priority on data resourcing their organizations in the same way that they would prepare their budgets. And here again, I don't just mean monitoring and evaluation. That's super critical [inaudible]. That's not a new idea. But they're resourcing the ability to bring [inaudible] data [inaudible] to your work to constantly be measuring and understanding what you're doing [inaudible]. Not to mention the real-time but more closely to when you're actually doing an intervention would be magical. And I do think that getting to that outcome, that requires a couple of pieces coming together. One, it requires a culture shift to say, "Hey, this is valuable." I think it also requires a shift in funding, because, you know, it's no surprise to 99% of the people listening that just getting operational support in a nonprofit already is nightmarish. If you try to convince someone that you also need data science money is like, you know – My sense fails me. It's impossible, it's really hard getting into an analogy that's that hard. And so, I think that's one of the other challenges, that the funding needs to come together and say there are resources [inaudible]. And then even lastly, if you're willing to apply data science and there's funding available for it, there's still going to be a pipeline problem, which is that the people who really need data are trying [inaudible] to have pretty bad degree of it now. A bit of computer programming smacked in there, and that's just not many people on the planet yet that have all those skills in one person, or even a constellation of people. And so, moving them away from the likes of Twitter and Facebook is still a challenge even if you have money. And so I think they're getting to that world where social impact organizations are resourcing data science to think about how they do their work. As a couple of preconditions that I [inaudible] along the way, but that's the world that I hope would be.

>> Me too. I share that vision with you, Jake. Thank you so much for joining the podcast today. Keep up the great work at DataKind. Where can people go to learn more about DataKind and to get involved?

>> Thank you so much, and I'll just say if people are interested please drop by datakind.org. We [inaudible] a global network of pro bono data scientists that are excited to jump in to help from even just some baby steps a data strategy to saying, "What can data science do?" [Inaudible] all the way through if you're

willing to actually dive into your data or build something [inaudible] kind of a long-term volunteering agent. Come on board, check us out at datakind.org. We also have chapters in San Francisco, New York, D.C., Dublin, London, [inaudible] the U.K., Bangor and Singapore. So they're always running [inaudible]. If you just want to stop by and meet some other big brained and bighearted nerds.

>> Awesome. Thank you so much, and thank you everyone for listening to this episode of the podcast. Be sure to check out MarketforGood.org for more information on these kinds of conversations and to catch up on previous episodes. Thank you so much, Jake, and best of luck with DataKind and all the great work that you're doing.

>> My pleasure. Thank you Andrew.