



## Stanford eCorner

### What You Learn by Doing [Entire Talk]

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Pulse Co-Founders Akshay Kothari and Ankit Gupta were curious Stanford graduate students always interested in taking on side projects to learn something new. In this light-hearted and insightful lecture, Kothari and Gupta discuss their experiences integrating what they learned into developing an elegant product, which eventually led to their startup's acquisition by LinkedIn.



#### Transcript

Thanks a lot. Really, really excited to be here. It's always a pleasure to be back on campus. I think we need more opportunities to come back. But thanks a lot for the lovely introduction and for those of you who did not raise their hands, you have about an hour to download Pulse, because I want a full raise of hands at the end of the presentation. But today - so hi, I'm Ankit. I'm Akshay. We met at Stanford, became really, really good friends and started Pulse in the last quarter of our studies, of our grad school here. And today we're here to talk about a topic that's really, really near and dear to our hearts. All of us in school and when we were bored of what we're actually doing, do side projects and that's kind of a way where we either do them for a grade or we do them just to have fun.

But I don't know how many of you, it was definitely not the case for us, stop and think about the side projects, right? Like, why are you doing this, what is actually the real driver and how is - is this in a way kind of improving you life or helping you in the future, right. And we did that for ourselves just after we launched Pulse and realized that there is a huge amount of value in doing side projects. Today here we are to talk about side projects and how should start taking them seriously. And these are just some quick projects that we are going to put in front of you that we have done in our last - in the two years that we were in school. And we will tell you - will take you through a journey and share with you why those side projects did not work, and what were the learnings behind that and how we, in addition to a lot of learning, how we use those and really applied that to Pulse and kind of turned it in an advantage for us. So the first one, this is an app that I worked on during my summer internship between my first and second year with a friend called Evan Reas, who is currently the founder of Circle. And it was called Buzz Web. The idea was really, really simple, iPhone 3GS had just launched at that time and the biggest change in the iPhone series was the ability to take videos. And so we were like yeah, lot of people will start taking videos because it's there. And what will they do with those videos, right.

And so we were creating a platform where you can get - you can see all the videos that people are taking and the goal was, oh, it will be on map where you will see what's happening right now. Like people will be taking a lot of videos about some celebrity sighting or some restaurant that opened up or this is where things start going down here, but you can see all these videos on a map and you will be able to spot what's happening and the business model was that an advertiser will be able to promote their product or service that someone has taken a video about, which we were hoping was quite frequent, that was not the case. And so this was the idea we tried - we had a lot of conversations or debate about it. It took us two months to launch and eventually we did that and it failed. It got 200 downloads in the first day, we got 20 downloads in the second day, maybe like two the rest of the days that week and then it really didn't getting downloads after that. And the biggest learning that I had from that was you need to focus on - we just had an idea that people will use, take a lot of videos and want to see them on a map. That was just the cool idea. We didn't actually have a solution for something that's a problem that users were facing. And the big learning was that you need to focus on solutions, not ideas. All of us here are really creative and we come up with loads

of ideas throughout the day and we become really excited about that.

And say, dude, we should start a company around that, but that's when you actually go to the other side where you talk to - where you find out what someone actually - a problem that they haven't solved that is when real value comes out. This project was a class project that couple of friends and I did in our computer vision course. It was a really, really fun course. It was taught by Sebastian Thrun at that time. And it was a regular class project that we were doing for a grade. And at the same time I was also taking some other D.school classes and so I was really excited about making it as a product, not just a class project. And so convinced my teammates, we went and talked to a lot of people and kind of looked at what computer vision problems can be solved, right. And so we eventually got to this project where you can sit in front of a computer and try on pairs of glasses. And so as you can see these are not glasses, this is just a rendering. But the essential concept was that say Warby Parker has a website and you can just sit there in front of your camera and you can move your head around and try glasses, because I have a pair of glasses and it's really hard for me when I go to a store and I take these off and then I put on another pair and I have to like stare at the mirror to actually see how I look in those glasses, because I can't see without my glasses.

So that was the idea at that time. But again it was - it just got to a class project and it failed for a bunch of reasons because it was hard to get the technology right, it would have taken us a lot of time and it was a very crowded market. But essentially the learning there was which we stumbled upon very fortunately was we were slowly moving from just thinking of it as a class project for a grade to an actual start-up. It was almost as if we do at least in computer science there are three to four courses that a graduate student takes and every course has a project usually. And so when we started thinking about each of these projects as potential start-ups that we could launch regardless of whether the start-up actually launched or not, you went through a lot of different ideas, you met with a lot of different people and you actually trained your mind in how to accept certain parts of an idea, how to reject certain parts of an idea, the best way to communicate that to people and so on. So the more projects that you - that we did as start-ups, the better we got at training ourselves to really do it when we wanted to afterwards. This third project is actually part of a research that I was doing at Stanford. And so when I came here in 2008, I had just come from India directly and I had no scholarship or any kind of grant and it wasn't really exciting to think of taking that much of a loan and trying to repay that later. So the first thing I did was try to get a research position at Stanford, and I was really lucky. This project in the radiology department and it was a really, really cool project, it was about using image processing on scans to detect the type of breast cancer and so without doing an active surgery, you can just look at the scan and try to classify what kind of cancer a person has.

And so initially it was really exciting project, but throughout my first year, kind of towards the end I got slightly bored of the project and other things that I could have done with my time, like meeting new people, coming up with new ideas or trying out new prototypes, all of those things where I wasn't able to do that. This project was cutting into that. But on the flipside, I was able to actually pay my tuition and be at Stanford because of this project. And so it was a really mind-boggling trade-off like in hindsight, it seems very simple, but it was very difficult. And I struggled with that almost towards the end of my two years wherein my last quarter, I decided hey, this is not worth it. I actually want to value my time. So essentially the big learning was time is more valuable than money. And so I took all of the earnings that I had, it was about \$5,000 to \$6,000 and spent it on tuition, food, rent, and basically spent that money on that D-school class that we started at Pulse. And so all of my time was focused on this one course, one product and one idea that we had and that obviously paid out really well. But essentially the learning was like your time is way more valuable than other things that people tell you are actually valuable.

And that also applies when you do a start-up where there are a million decisions you have to do. When we launched Pulse there was a client ready to pay \$30,000 during our first month, but we decided not to pursue that instead carry out kind of working on our roadmap because we knew we were building something a lot more valuable. So that's number three. I'll pass on to Akshay for the rest. Yeah. So, I wanted to kind of talk similarly on three projects I worked at Stanford like Ankit, in my two years and I learned a lot from it. So this was one of the first - my first project that I kind of thought let's take it out there. This was a project I had with a couple of friends in my summer, between my first and second year. And we actually got a grant at light speed to basically, I think we got about \$30,000 to kind of build this app and actually push it out. And a simple idea we had was that we saw our people kind of at least in Stanford like running late to meetings or running late and still driving anyone kind of - just kind of push out your phone and say I'm a few minutes late and then that text message goes.

So it was very simple app that we actually built, where you can actually see the contacts up there and you can kind of select like a set message and then just send it in like, without actually typing any message. And we actually launched it. I think this app still exists and I don't know what happening to it, but it actually taught me a lot of interesting things which I didn't realize. I think when I did this project, I was actually in the frame of mind where I was really thinking about starting a company like doing a start-up, being an entrepreneur, like those things were really important to me and then this summer when I kind of went through that I realized that actually adds a lot of pressure on you. You suddenly feel like oh, I'm an entrepreneur, I'm doing the start-up and kind of like moves you away from thinking about the core thing that you're actually working on, which is working on products. Like I think that working on product is a lot simpler, a lot easier to think about rather than thinking about I want to do a start-up, I want to be an entrepreneur. And actually during the start-up, I learned a lot about founder dynamics.

We actually had four founders and during that summer we actually had to fire one founder and we made all sorts of mistakes in terms of like how we should think about equity, how we should think about legal stuff, like how we should think about product and actually just kind of this app that we actually spent almost 10 weeks building, we didn't think anything about marketing, which just kind of put it on the App Store and thought we would get thousands and thousands of downloads, that never happens. You have to really think about like how is this going to be positioned in the market, how are you going to market it, what are some other things you're going to do so that people actually discover it. So anyways that summer ended and I came back to Stanford because, this wasn't really going anywhere, but I came back with all these learnings about if I were to start a company or I am working on a product that's taking off, it's going to - I know exactly how I should think about equity between my founders, I should think about how do you structure the legal stuff well so that we don't have that.

So a lot of that was really key learnings for us. The second project that I did was actually in Rwanda. It was part of the class called extreme affordability at Stanford, it's offered at the design school. And it was really fascinating because I did my undergrad in electrical engineering and also my Masters in electrical engineering, but we kind of sit in the class and where we get problems, we spend a lot of time in labs, we kind of like talk to some peers, we kind of solve problems on paper and give it to them. I remember my first project at D.school was to redesign how people eat Ramen noodles and I was like these guys must be kidding, like redesigning Ramen noodles like it's fine the way it is. And they pushed us to go out there and observe people eating Ramen noodles. And they pushed us to kind of go to markets and see what people kind of buy. And I found that really, really like awkward the first time. I remember I was at Maru Ichi, in Mountain View, and I was just kind of like staring at people eating Ramen noodles. And I was like he must be thinking I'm some sort of a freak doing that, and I was thankfully with another couple of people who started talking about oh, that person like the water is kind of coming out of the bowl, that person is kind of eating while he is walking, you start seeing people like doing things that they do, but there are problems with the way they're doing it.

And so when we did - when I did the extreme course, we were trying to essentially improve nutrition for Rwanda and thinking about how we're going to actually improve the nutrition in the country where a lot of people actually die because they don't have enough nutrition. And it's one thing to think about, okay, well we want to try nutrition, so we have these 10 ideas. But there is another thing were you actually go out there and you spend 10 days. So actually sitting with these people like we spent 10 days in Rwanda on the ground, really understanding how they live, what they eat, what is their daily process, what are the things they actually do and how does our solution fit into their daily lives, so that we are not actually trying for a huge behavioral change. And this was a huge learning for me because this is a project I was doing alongside courses like machine learning and courses like artificial intelligence where we don't get this experience, but I think in this case just getting that knowledge, really understanding how people live is very important for actually building your products, because you really need to know how people currently live and what people currently do and what problems they have before you go out there and actually build something for them. And then it kind of started to come all together in some ways where this is the project Ankit and I actually did with a friend Albert in the data visualization class where this was an idea that a lot of people wanted to kind of visualize their lives in kind of a timeline and this was actually - we actually used the Facebook API and built this timeline two years before they introduced their timeline. So if you actually like rotate this 90 degrees like it's the Facebook timeline. But we actually built this in our class and this was where it started to come together where we actually talked to a lot of people who used Facebook on campus or in cafes in Palo Alto and started talking to them in terms of how they would want to visualize their lives. And we built this in a couple of weeks, really fast, rapid prototyping where all your Facebook data was put on a timeline, you could kind of browse down there over the last two years, you can actually search for a person and see what kind of interactions you've had with them. It was just a neat tool that actually was appreciated by a lot of people who were in the class and who actually got to see this.

It was also the time where I started to feel like all the classes that I have taken at the D.school which taught me going out there, speaking to people, getting insights from them, and then tying it back to the knowledge we get from computer science and electrical engineering courses in terms of actually building tools, started to come together where we were starting to do both of them together. And in this case like, just kind of being able to build something quickly, like I think this was a key learning for me before coming to Stanford, I had a lot of ideas in my head, but I didn't do anything about it. And I realized one thing is that your - I think your head can only take - only keep so many ideas and so if you want to actually bring new, more new ideas to yourself, you actually need to do something about your current ideas so that, either it works and you go for it or it doesn't work and it's out of your heads that you have space for new ideas to come in. And I actually really believe that, I think like you can't - otherwise you just kind of, you have five ideas and you think all of them are like \$1 billion ideas, but you're not doing anything about it. But actually like even spending two weeks, four weeks or even a day like prototyping something and realizing whether this has some use not, is key to figure it kind of continuing to iterate. And so like these were three of my projects. Ankit talked three of his projects. These six projects actually like taught us a lot of interesting things in Stanford just in these two years, just through class projects. And we learned a lot about finding need like what do people really want? We found a lot about what's the value of time at this stage when we were in our early 20s. Like is this more valuable than actually like spending time on other things that we're less passionate about.

We learned a lot about founder dynamics, like how important it is to keep it simple to have good kind of transparent feedback for each other. Ankit and I've worked for over four years, but we work for Pulse over the last three years and it's been really, really important for us to like when I have a problem to just call Ankit for lunch and tell him that hey, like what you did here it was not right, I didn't like that, in the future let's make sure we are always in sync or for him to tell me that it would be nice if you could hear me out a little bit more. I think like just that dynamics is extremely important because at the end of the day what you're building is a start-up, it's all about people and the people really need to click, need to work together and collaborate. So for me to actually make some of those mistakes in the first summer actually was hugely important for when we've actually built Pulse. And then it kind of go on with like, you know, we still go out every Friday and talk to a lot of people, understand how are they reading news today, like what are you doing, what kind of sources are you reading, where are you reading it, how many times in the day do you read news, all of those actually help us figure out what are the products we're going to build. And so, all of that actually led to the last quarter at Stanford, where we actually built Pulse which I was really pleased that about half the room kind of knew about it. So we built this as - you know, all those learnings came together. We built the first version of Pulse again in a D.school class in five weeks. It was an iPad app. We built it in five weeks, put it on the App Store, and it kind of took off in a big way.

And so the last three years, we've been really focused on kind of expanding that vision, expanding the product. And today actually having an app that's used by over 30 million people has been kind of a culmination of a lot of these learnings that we've had over the two years we were at Stanford. And to a point where now we're actually employees of LinkedIn, because LinkedIn bought us about two weeks ago for \$90 million. And so, I think - a lot of that I think people can say that sometimes we can think of it as like, they came up with this idea in five weeks, they put it on the App Store and then this kind of just became this huge success. But actually there was a lot of small pieces at Stanford that actually made it possible. Small things we learned in these side projects. And the more side projects you do, the more mistakes you make, the more learning you have, and you never know when that side project is going to become a big company. But if you stay focused on actually building products, if you stay focused on actually just kind of putting things out there, seeing how people use it, seeing if there is something interesting, you might actually be sitting on something that's, you know, the next big product that may make it out there. So I wanted to kind of keep that short kind of talk to you about like some of the things we've learned. But, really open it up to questions you guys have.

We were here just over three years ago listening to people and we thought that, you know, one of the things I realized was like I wanted to ask more questions and kind of think about things or ask questions, particular things that you know, you don't hear otherwise. And so, Ankit and I are pretty happy to be very transparent about all the things we did at Stanford, good or bad that really helped us actually build Pulse to where it is today. So let's open up to any questions you guys have. Yeah. Go for it. So one of the things you mentioned was product marketing. So, what were some of the things that - well how did you learn what was working and what wasn't working? Yeah. So I can now talk a little bit about what we did with Pulse. So Pulse, it was - because it was built in five weeks, it was very barebones. I did the visual design as an electrical engineer, so you can imagine how bad it was initially.

And so, I am glad we are not sharing those mocks anywhere, but it was actually pretty bad. And we're not sure if it was ready for prime time and so what we did was we actually thought, let's target a smaller demographic first. So what we did was we actually, my good friend Joel has this really cool camera and we said can we just shoot a film of about a minute which basically goes through the app and shows what it can do. And so we shot this at Satura Cakes in Palo Alto, which actually is not there anymore, but we shot it there and we put this video in a bunch of design blogs out there. So we put it in Core77, NotCot, not the tech blogs, we put it more in the design blogs just to see people's reactions to it. And more design blogs picked up that video and so already we saw a lot of people actually curious about this app. So, even before we had actually launched it in the App Store people were actually talking about it. We both found the interaction that we really need. And so that was the first thing, and then we actually launched it without actually press to just see how real people use it, and we actually saw the app actually shoot up to the top of the news category. But there was a lot of feedback, like the visual design was really bad, people wanted more sources, they wanted to add, people wanted a better catalog.

And so we spend another two weeks actually refining the product to those feedback points, and getting that feedback quickly was really important for us. Then when we felt comfortable we actually sat down with a visual designer for a full day basically, like took out all my designs and actually made it much cleaner like you see in these mocks, and then we actually did a smart thing, we actually made another video. But in this video we actually focused on sources that we wanted to cover us. So we focused on like we had TechCrunch in there, we had New York Times in there, we had a bunch of sources there in Pulse being used, and then we actually emailed TechCrunch and said, see TechCrunch is featured in this video, we emailed New York Times and said you are featured in this video, this is a new product that Stanford students have built like you guys may want to cover us. Simple, and then they picked up that video, so TechCrunch actually wrote it about. They wrote about it and then we literally shot to the top of the App Store overall, not just the news category, and then New York Times picked up, because they said, well there is a class project that's suddenly in the top of the App Store. And so we were - that was the first week when we actually got more mainstream press, but we were actually ready at that time to be able to kind of accommodate

a much bigger user base as well. Could you please tell me a little bit about the team and how it expanded, and what you learned during the process? You had such a rapid success. Yeah, I think that's actually one of the big benefits of being at Stanford, a lot of the people that we meet here eventually become part of your startup family. Like the very first engineer that we hired, so Akshay was more on the design side.

I did the original iOS apps and so the very first engineer we hired was Albert, and the three of us did the last project that you saw together. And Albert did the Android app. And then slowly we built out a team where we hired Greg, who was our lead backend engineer, who had worked with Akshay before. On the previous startup, the ZapText one, I had actually worked with him, so I actually pulled him back into a more successful one. Yeah, and then we hired Christina who - I think you TAed... Yeah. 528 00:26:40,740 --> 00:26:45,439 ...in one of the courses, and through a lot of like friend, TA network, we got a lot of our early hires. Yeah, actually first seven, eight people were all from Stanford because we - at that time we hadn't raised a lot of money. We actually were not making a whole lot, and so those were - Stanford people are the crazy people who actually believe in you and like believe in your hope, and actually join you, and so we kind of got people who we had worked before or who were friends that they kind of joined us and actually - and we got to a point where we actually raised our seed run, which is about \$1 million, which allowed us to actually move into a real office and then kind of slowly build it up. I think our hiring so far, I think we've tried to stay small.

We were about 25 people when LinkedIn acquired us. So it's still tiny compared to the traffic we had. But we - our hiring strategy was more about actually hiring people after you feel the pinch rather than really having the foresight that we may have this pain in the future, so. When you were 25 how many of them were women? When we were 25 how many women, I think we had about seven or eight women in the company. We still do. The dynamics - how would the dynamics have been different if the third founder was a woman rather than two guys? I wouldn't know I haven't started a company with... You've got women who you've been working with at Stanford if I am not mistaken. So I think. Could you repeat? Sure, yes. I asked how it might have been different if one of their co-founders was female? The question is, how would the dynamics be different if one of our co-founders was female? I think for us like Ankit and I have actually tried very hard to actually keep a balance in the company and actually having women be part of the team.

And the reason is actually, there is a lot of good reasons for it. But I think there is a lot of things that I think that a women can think that a man wouldn't think necessarily. Especially for Pulse actually we were trying to build a product which actually is used by mainstream people. It's not built for just males who are using - just reading about tech or other things. It's actually built for anybody who wants to read about content. And so actually having that DNA in the company where Christina who is our first hire, to tell us like hey, like, you know, it's good we have tech sources but we also need to have fashion and lifestyle. We also need to have other things that people would read. And so, having that balance is really good. The other thing that was really good from our internal culture perspective is that actually just people in general are much more well behaved if there are like, you know, if it's not just like 10 dudes like in a company. Men are well behaved.

Yeah, mostly men are well behaved I guess. So actually internal culture was hugely benefited. And it really helped us to hire more female employees. We actually had Gene who was our first - our second Android engineer, and it was really hard to see any other startups have female engineers in their teams, which is great. So, after the LinkedIn acquisition, what are the sacrifices, if any, that you had to make and what are kind of the core values of Pulse and the team dynamic that you hold near and dear trying to maintain a post transition. So today was my official third day at LinkedIn, so I am still figuring out some of those things. But I'll tell you this. So, Pulse actually had a lot of content, a lot of users but we were trying to get identity which is basically like who are these people reading, what's their background. And LinkedIn on the other side has identity, it has over 220 million users, they know where they are working, and they are trying to get into content. So it's a very complementary kind of fit for both teams.

And LinkedIn has been really, really good in terms of keeping us, keeping the same culture that we have. So we all sit together at LinkedIn. We're still driving the Pulse App. But suddenly we find ourselves actually having a lot more resources in terms of you know, they have among the best machine learning teams in the valley. They have incredible mobile products, and so just being able to tap into them like I think has been so far amazing. But we'll find out more as we kind of fully integrate with them. Have you thought consciously about your culture, I mean how would you characterize your culture? Yeah, I can take and you should add more. But I think culture is actually one of the most important things that I think every founder should think about. And the interesting thing is like the culture changes very fast. Like, with two people like adding another person can change it a fair bit and the culture could be very different for 4 people versus 10 people versus 20 people.

And so you have to - from a founder perspective you have to always be changing processes to make sure that everybody gets that. For us actually, we borrowed, we stole a lot of ideas from D.school and put it into Pulse. And so there are no cubes like it's open floor, everybody has access to everyone. It's a very transparent company. There are post-its all around so you can - every person should be thinking about product, it's not just like us or the product manager. Even if you are backend engineer you should be thinking about product a lot. There is whiteboard walls so you can just write anywhere, any space can

become a discussion space because you never know who you're going to run into and what serendipitous ideas kind of come out. On Fridays we have a session, at the end of Friday to wrap up the week, we have a session which we call, "I like, I wish, I wonder" which is again stolen from the D.school. But I think at D.school, what they used to do is at the end of the class, they used to - you could sit down for 10 minutes and give feedback to your professor. You could say like, oh I like how you did this or I wish this was taught in a different way.

And so we stole that and we made it our debrief internally which we still do today every Friday every week. And so people get together in a big circle at Pulse, 25 people. So we started when we were 5 but even at 25 we do this where we gather around in a circle and everybody gets a chance to say anything on their mind. The only requirement is the sentence should start with I like something, I wish something, or I wonder something. And so they could say like you know I wish Akshay spoke less or I like Ankit's dressing sense or I wonder what's going to happen to Pulse at LinkedIn. So it's a very open culture. I wonder how you monetize Pulse? Great question. So I think for a monetization, we're - it might change depending because of the LinkedIn acquisition. But I think at the core we're really excited about content marketing, and in very simple terms content marketing is essentially allowing brands to be publishers, to be able to write their content. And so Redbull does this really well, where they have - they sponsor a lot of events, they write a lot of interesting content that people read.

And so, our core belief is that advertising should not be annoying, it shouldn't feel like advertising, it shouldn't feel like the banners you see on the Web. It should feel like content, it should feel like something you want to actually engage in. And Pulse is all about content. And so I think our monetization plan is to essentially - just like you can read different publishers, like brands will be able to have a voice inside Pulse as well. Go for it. Do you have any wisdom or advice about fundraising and like how you got funds to - especially during the initial parts of your - of a startup? So the question was if there is any wisdom around fundraising. You can start. Yeah, the best wisdom is that hopefully you don't have to think about it. We didn't have to think about it. So, essentially we stayed focused on product, and we got lucky in a couple of different ways.

First was - I think Ankit and I built Pulse and we said, okay, we're going to push this out for free. That was the first thing that I think most people think, like oh yeah, it's the value, push things for free you get lots of users. But we had a professor, Michael Dearing, who said why are you giving such a beautiful product for free and I think we were thinking, well, this looks really ugly, nobody is going to buy this. But he said no, I think you should ask people. So we actually went out to cafes and asked them, how much would they actually pay for it. We got people actually saying that they would actually pay \$3 to \$5. So the first version of Pulse actually had a \$4 price tag which was awesome because suddenly we - I think in the first six months we sold about a quarter million of these copies, so that was our first million dollars where we did not have to actually ask investors for money. And then we had enough traction and we were ready to kind of expand beyond that, where investors were actually asking us whether they could invest. So it's a very enviable position and I think we got really lucky, we got really fortunate with Pulse. But in general I think - we can talk offline in terms of exact dynamics that you should think about if you are going out fundraising in terms of what are some of the things that work, do not work.

But if you stay focused on product hopefully like people will notice that. And in today's world actually you don't need that much money to start things, unless you're actually building satellites, which I know a couple of weeks ago somebody spoke about that. But I think with a lot of consumer startups you don't need that much money. So I think start something out there, push it out there, see if that has wheels before you actually really think about raising money. Yeah, and the other thing that I would add to that was it was very good when we did fundraising because Akshay was more focused on that whereas I was still focused on the product. And usually it's the case that when you're fundraising your product suffers. And if you let that happen then it impacts your fundraising negatively also. So it's always very important to keep the product going however you can while you're in fundraising. Go for it. Did you consider bootstrapping all the way? We did, we did.

So we sold about a quarter million of these apps. So it was - we had a few hundred thousand dollars in the bank. And we got to a point where we could continue doing that and that would have hopefully like sold more and we would have made - I think we got to a point where a lot of the ideas in our heads was actually built around the fact that not just you but your friends, your family, all of you will be reading news on Pulse, and your experience will get even better when all your people you are connected with also read news on Pulse. And we got to a point also personally where we decided that we kind of wanted - we had bigger dreams, we just didn't want to have like a million dollar that we split a few, you know, with three or four people and kind of run with that. Although there is nothing wrong with that. But I think personally we wanted to kind of really kind of shoot for the fences with Pulse, especially because this was the first company that Ankit and I are, you know, seriously working for or started. And so we decided to kind of take the leap and actually do that. But I think, I mean I think we could have actually stayed bootstrapped and that could have been an interesting kind of trajectory for Pulse as well. Go for it. So obviously one of the - a lot of the traditional content publishers, media companies are facing a lot of challenges in terms of monetizing their content or having switched to new monetization channels.

What are some of the interesting or exciting ways do we think content delivery platforms like Pulse can help with that, beyond just helping them reaching a broader or more targeted readership? So the question was like what's the value

proposition for publishers to be on Pulse. I mean there is a third value there in terms of readership, but what are some of the most exciting ones you think can help them in terms of monetization. So monetization I think for publishers, I think - so there is two value propositions for them. One is obviously getting readership, the other is making money. And for making money I think there are two bets we've made with and I think they have been pretty interesting. So I think we did not have a background in journalism or publishing and so we kind of came in really rethinking how advertising looks, and rethinking how commerce looks for these content publishers. I've talked a little bit about advertising which is I think we think content marketing is the future which is essentially stop thinking of ads as banners and something that destroy the user experience. Rethink of ads as content that people want to read about. So that's one piece. The other piece that we've thought about is commerce which is essentially we launched a partnership with Wall Street Journal where you could actually buy the best articles of today from Wall Street Journal for \$1 a month.

And that was actually one of the most innovative partnerships. Actually the only time Wall Street Journal has actually done a different partnership beyond their own model and we actually got - convinced them to actually do it for \$1 a month. And the idea there was very simple which was basically if you get a brand new iPhone, you download a bunch of free apps because it's easy to install. But there comes a time when you actually put in your credit card details and get that \$1 app. I don't know if you guys have noticed that. But once you buy that \$1 app, then like you are buying \$5 apps, then \$20 apps, then you've just kind of like spending a lot on the platform. And we thought like we could take that idea and bring it to the publishing world where if Wall Street Journal today, if you want to actually buy something that would be about \$45 a month or \$35 a month, that's a huge price point for people who actually get free content, you know, convincing them to actually pay \$35 a month is a lot. And so we thought well maybe we can prime them so that people can actually buy something for \$1 a month and those people would actually be great customers who could actually buy full subscriptions also. So we're in that strategy, we're still figuring out how that kind of plays out for us but that's the other thing we have kind of experimented with. You mentioned that you had some problems with the start and perhaps you moved too quick with equity, and you had to fire a founder.

Do you have any recommendations or suggestions for others thinking of starting companies? I would say a few but I think like there is a lot of - I think the cool thing about now is there is a lot of information online. And so, I think you should definitely read every line of Venture Hacks because it has everything in terms of details of how these are structured. I think the other advice I would say, particularly with founders is actually - I actually think one it's extremely hard like just actually being a single founder. I don't even know how a single founder does it because there is so much stress on a daily basis. Two is actually for me it has been ideal, like just working with Ankit has been really fun because there has been times when like I've been really, really hit low in terms of all the things that went wrong today and Ankit is like in the medium and so we kind of like balance each other. And then there has been times when Ankit has kind of hit low and I am doing okay because maybe the sales are okay. And so, I think two has been really good for us in terms of just kind of balancing each other's energy. I think beyond two, I think three is probably still okay but I think four is too many. And so actually like keeping your founders to maybe two ideally or three is good because then I think you have a couple of brains to think about, someone to argue something. If you're only founder, it might not have enough people to kind of really bounce ideas off of, but with four actually we were thinking about like our personal issues more than we were thinking about ideas about the startup, right.

I think it was just too many cooks in the kitchen at that point. Yeah, and the founder culture becomes really important, right. That actually creates the company culture in some sense. And that's why being very transparent with each other, giving open feedback, being constructive about each other's ideas, all of that happens very smoothly when you are two people. But when you are three or more it just breaks down because there is too many connections happening. Yeah, I think like open feedback is really key. I think like Ankit and I started that in the first two months when we were working alone, and actually in the company everybody can give feedback. We have an internal forum called AAAAA which is essentially like Ask Akshay And Ankit Anonymously, which is this like simple anonymous Google forum which anybody in the company can ask random questions to us like, I don't know, like why the toilet is not working and then - What happens in board meetings... Or what happens in board meetings. And Ankit and I have to answer that every Friday.

So every Friday before we do "I like, I wish, I wonder" we actually go through all the questions people have asked and everybody has access to this doc. So they can see all the questions that other people are asking. And then I think that open feedback loop is really, really important because I think one of the ways I think about it is that these like small tremors like are good for the earth. Like you don't want kind of the pressure to build and have a massive earthquake, right. Like you want this kind of - you want the pressure to be released every now and then so that you don't actually have kind of a big outlash against anyone. Can you please tell us more about your negotiation experience with the publisher in order to get their article for \$1 per month, since I am building a startup and I am going to negotiate with the vendors and I don't know where to start, you know. Yes, so the question is like how do you kind of negotiate with publishers or vendors. It's really hard, like it's - so we tried it when we were really small, and like nobody like paid attention to us. And so we just dropped it. We decided we were not going to even bother talking to publishers.

And so, the first year and a half actually we did not talk to publishers, we just focused on getting - there was a lot of enough

kind of public RSS feeds out there, kind of public content out there, and so we decided we're not going to talk to publishers, we're just going to try to build an audience first and see if people - if we can convince enough people to actually download Pulse and use the content and actually read the content here. When we got to about a couple of million users, like three or four million users, publishers started reaching out to us and they said, I actually want to be part of Pulse because I want to actually expand my audience. And so we just kind of did that for a while until we actually raised our Series A and then we actually built a team which does more outreach and actually gets more publishers. But actually if you can actually create a scenario, sorry this is a non-answer, but if you can create a scenario where they need you more than you need them, then you're kind of in a good position. Which is usually when you focus on the product. Yeah. Like it all comes back to what is your mission, what are your values and what is your product actually doing. And it's possible - like I think for us at least I don't know what your business is, but for us like we kind of had to hack around a lot of different things to make that possible. But I think from their perspective also you can think that for a publisher they might be getting pitched a thousand ideas every day, and so they can't really talk to a thousand companies. But when they see a company as really kind of growing then they have to talk to them, right, so...

I'm a little bit more curious. So how could you acquire the first contents, so most of the content I mean are copyright, right? No, there is a lot of public content, public feeds available. So a lot of tech blogs, a lot of small blogs are available freely that you can use. So we kind of like did whatever we could with the content we had available before and now we have partnerships with over 750 publishers. But initially we did not focus on that that much. We just focused on building a great product that people could use to read. That's great, thanks. Did you face any legal problems while you were founding Pulse, problems related to incorporation or visa being international founders? Ankit laughs because I think we got sued by New York Times I think very early on. Yes, I think related to visa stuff we were lucky, we were students, we were on a student visa. We put the company on e-verifier so we could actually work for another 15 months after like 29 months or something.

So that was easy if you are starting off as a student. And I think the biggest advice, like you should definitely incorporate your company and get all that going as soon as you can because that really helps you if you want to start monetizing and you're on a student visa, you know, you can start doing that. Or it also lends kind of a legitimacy to what I am doing and prevents you from giving up. I'm just going to add a disclaimer there. You should talk to like immigration lawyers and tax lawyers, do not take our word for it but I think it's possible. We can connect you with them. But actually on the legal side we did have a really fascinating day in June I think, we were still in school. So this was after the New York Times actually wrote about us and in terms of more on the editorial side. And so, but I think this was Monday, I think it was sometime in June, early June. It was the WWDC conference and Steve Jobs was going to actually release the iPhone 4 which was a huge improvement.

And then before he actually launched the iPhone 4, he talked about five or six apps that he loves. And we had no idea, Apple doesn't tell you anything until you actually see it. And so, I was watching this in the dorm here and Ankit was actually in New York. So he is like let me show you some iPad apps that I like and there we were. We were the first, Pulse was the first app that he talked about. And I was just like, did that really happen. Am I dreaming here? But, anyway, so this is like 10am Monday morning, I am kind of going berserk. This is probably like the highest high, it's probably like the happiest I've ever been. Come like maybe five hours later, 3 o'clock, 3:30 to be precise, Ankit and I get an email from Apple saying that, you know, New York Times has complained and we've taken your app out of the store, five hours later. So when they talk about rollercoaster, you know, the entrepreneur's life being a rollercoaster, that happened in five hours.

I think a lot of things that happened - and then we were back into the store the next day morning, but that was one of the craziest Mondays I've ever had or we've ever had. Go for it. So you raised a very interesting question about luck, that you guys were lucky. So in your opinion what would you obviously say was luck versus something that you learned, like skill from all the experiences that you have, something very specific maybe? Luck versus skill. I think we may have different views, so maybe both of us can actually talk. I mean I think - I mean luck is very ambiguous because to me a lot of what luck is, is just your subconscious algorithms that you develop which could be skills that you might know or might not know of. But throughout a lot of these side projects or throughout kind of just thinking through things deeply, there is a lot of things that you develop that you base your decisions upon. And that's intuition or that's God or whatever, and that makes you feel lucky because you chose this based on very little data and it was like, oh I was lucky I came to Stanford, that kind of thing, or I was lucky I took this d.school class that launched Pulse. But there is obviously that's not all of it. I think there is real, real luck which could be meeting Akshay in the first week of school or just like a lot of - yeah there are those moments or being mentioned by Steve Jobs I guess.

Yes, I think like it's - I think a lot - I actually attribute a lot of Pulse to like good timing, good luck I think. But I think actually you can create that for you, like I think of it as more like, you know, you're at a bar and there is like you can play darts and you just kind of keep throwing darts, like sometimes you'll hit the bull's eye. So, I actually think you can create that. But if you don't play darts like I don't know if you ever hit the bull's eye, but actually with Pulse there was a lot of good timing, like iPad had just come out, and we were one of the early news apps. We were written about in New York Times and so we were on the top of the App Store, and that was probably the time that Steve Jobs was probably thinking about like what are the apps that I want to actually talk about, and so just being on the top of the App Store just that day before he actually talks about it was, I don't

know, it was probably godsend. But there is that interesting anecdote with, what's that newspaper app, oh. Yes, there was also... Early Editions. There was also a competitor back then whom you - I think it was a small company and I think we were both fighting to like stay ahead of each other in news category, and I think we both pushed our app updates at the same time. I think we got approved and then I think the other developer I guess got delayed or fell sick or something, and then that was like - just a day difference where I think Pulse got picked up and then it was, you know, on the top of the store.

But I think a lot of things have happened. Like, I think we were lucky to be out on Android first when Amazon actually picked us as one of the apps they wanted to put on their Kindle Fire. It was just like being at the right place at the right time, like you can't really like hope for that but I think you can try different things and hopefully like some things work out. But I think - and I think we've tried really hard but I think it would be false to say that everything is because of our hard work. I think a lot of it was good timing, a lot of it was luck, a lot of it was kind of meant to be. Can you describe a little bit more about your launch strategy and how you got to be noticed. I know you guys talked a little bit about posting on design blogs but how were you guys approaching? So the question is about how we - what is our strategy to get noticed. I think the strategy is actually evolving every day. It started with posting videos on design blogs. But I don't think we can honestly say that we have it down and we know what the strategy is.

One thing I can definitely say, and we can add to that, is we realized very early on that you need to be - A, you need to be very focused on your product because your product speaks much more than any kind of press that you get or any other publicity that you get. And B, you need to be able to have the right focus for that product and so who is the user, what is the need that you are solving with that product, and how does that product help someone's life. And so when I am a passionate user of Pulse and I go to my friend, how do I tell - how do I convince them to download Pulse and set it up right then. What do I say? And all of that comes from the founders and the team being very focused on this one thing that we're trying to solve. And that basically drives itself. Well that's the current working hypothesis. And yes, I guess like one thing I read recently that I liked a lot was essentially don't think of it as a launch, like I think like we have this idea in our heads that we are working on this thing for months or weeks and we're going to have a launch. But if you like take that stress away from you, you just kind of push it out, see how people are using, like even if you have 100 people really engaged and using it - one of the things we did in Pulse and totally through luck, but it wasn't planned, when we first pushed out the app live on App Store, the first version of the app actually had this heart sign on the top right. That heart sign was people talk about maybe you like the app or maybe you do that. When you click on that heart sign on the app it would open up this inbox, kind of a compose mail directed to us with the subject Feedback For Pulse.

And people, all they needed to do was had to type something in. And so even if people kind of like by mistake clicked on that, they sent us some interesting feedback. And like a lot of people may actually send you like, oh this app is good or this app sucks or something like that. But 1 out of 10 mails was actually like people doing work for you. They would be like, you know this visual design is really bad, you should try this color and we were like holy shit people are actually telling us what color we should use here, or like people are actually telling us hey I really want to read this, this and this. And I remember for the first four or five weeks Ankit and I actually painfully read every email, responded to every email, got into a discussion. There was that one really big email from a neuroscientist who actually told us that the design we have is so good that a brain can really visualize a lot of content, this is the most efficient design for the brain to kind of actually like skim through content. And we were like yeah, we exactly thought about that. But I think like the key is like, you know, even if you have only 100 people but they are really engaged, then you can actually get to a point where hopefully you are actually tracking data, and you can actually look at analytics and you can actually figure out like, hey this is why people are so engaged. And if we do this, we may be able to get a bunch of other people also engaged.

But try to remove that stress of being launched because I think we can tell you our number is like - when people write about you in TechCrunch or New York Times or other things, you're going to see a spike, no question about it, you're going to see 10 times, 20 times, 100 times more downloads than anybody else, but those downloads, let's say if I got a thousand downloads every day and because I was on TechCrunch we got like 50,000 downloads, those 50,000 downloads are not people who will most likely be using your app three months from now. They are the people who kind of read about it, downloaded it and probably like deleted the app. But I think the people who are going to actually use your product are people who actually discovered it and actually liked it and actually told their friends about it. Those are the people who will stick with your product, those are the people who will actually make you - make your product and make your company a lot more successful rather than the people who kind of just read about it in TechCrunch today, downloaded it and then threw it. So try to remove that launch stress away, just push things out there, see what people say, kind of build on top of that. Do we have more time? We invite everybody to come talk to them afterwards and ask questions. But, on behalf of STVP, Draper Fisher Jurvetson, Stanford BASES and all of us here at Stanford today thank you, Ankit and Akshay, for joining us. Thank you.