Albert Chou:

This is IT Visionaries, your number one source for actionable insights and exclusive interviews with CIOs, CTOs, and CISOs, and many more. I'm your host, Albert Chou, a former CIO, former sales VP, and now podcast host. Welcome everyone to another episode of IT Visionaries. And today we have a special guest. His name is Vasco Pedro, and he's the co-founder and CEO of a company called Unbabel, U-N-B-A-B-E-L. Vasco, welcome to the show.

Vasco Pedro:

Thank you. It's great to be here, Albert.

Albert Chou:

Hey, listen, we always are excited to have new people on our show, but before we get too far into it, let's talk a little bit about Unbabel. What does it do? Because I'm gonna read really quick off the website. For anyone who wants, who has not heard of Unbabel real quick, Unbabel's LangOps platform combines the best blend of machine and human translation so you can provide a consistent, multilingual customer experience, grow to new markets, and build trust around the world. Vasco, it sounds like you guys translate language, specifically business language, but if you could please tell us what is Unbabel? What does it do? And also, what is LangOps?

Vasco Pedro:

Okay, yeah. Uh, there's a fundamental problem in the world, which is people speak different languages. And so what it, what, what it means is that this company's scale, um, they face this problem, right? It's like, "Hey, my, I'm moving to a new market. My customers now don't speak my language. So how do I sell? How do I market? How do I support my customers?" This is a, a problem that's never really gonna end because we're not all gonna start speaking English, and the world is more global all the time. So there's more pressure for companies to, uh, go into multiple markets sooner.

So that, that's what we do. We help companies deal with language barriers as they scale across markets. Now, why is this different? Right? And, and it ties in with language operations, more LangOps, LangOps as you said. I, there's, there's a fundamental new technology that is having huge impact in all of our lives, AI. And AI and specifically different assets of machine learning, um, have always had a, uh, a lot of applications in language. Actually, machine translation was kind of the original AI area, uh, coming, coming out of the Second World War, and the whole cryptography, um, area, this idea that, "Oh, we'll just take the techniques that we invented to crack the, you know, the, the, the different codes used by different countries and use that to try and crack languages."

And that's kind of how actually the original AI area came up, right? So, um, AI is now finally after, you know, people thought they would solve this in like five, 10 years. Turns out like took about 67 years to get to a point where it's having meaningful impact, but it is. And so at the core of this is this shift that until now, for the most part, if you wanted to translate something, you needed people, right?

Albert Chou:

Sure.

Vasco Pedro:

You go out and you're like, "Hey, I'm gonna hire a bunch of translators and they're gonna do this thing," right? And now we're kind of seeing this paradigm shift where AI is having a very meaningful impact.

And in fact, a lot of use cases, they're kind of AI centric, where you say, "Well, you know, if I'm gonna translate an email, maybe the first thing I'm gonna do is try a machine translation engine. And then if that doesn't work, then I'll add some humans on top."

And this creation of all of this, uh, new technology is driving everyone in the localization industry to start having to learn how to, uh, how to think from an AI centric perspective in how to solve language. And that's kind of the idea. What we're seeing is the same shift that happened with DevOps, where you went from sysadmins, you know, uh, on-premise servers to call computing, and you have the rise of DevOps. You're gonna have localization, people starting to have, think from an AI centric perspective becoming LangOps, right? So- sorry, long an answer, but that's, uh, that's the gist.

Albert Chou:

So I have some experience in the old way of doing things. So I, I'll, let me phrase up how we used to do it, and you tell me what it, it looks like today, right? So just, just feels like a long time ago now, I say that. Seven years ago I was a part of a software company, and as we went globally at global users, we realized very quickly that we had a very difficult challenge of translating the software properly. Um, not only did we not know what all the terms were in all these different languages, 'cause we went global, like overnight, it's because we signed a company like Coca-Cola and they had users literally worldwide. And it was like, "Wow, okay." They wanted the software localized for everywhere.

It was an issue of not only accuracy, but as well as, um, fit. Uh, we learned very, the hard way, like languages like German and Swedish and Icelandic, they have long characters. Like there's a lot of characters per word, right? (laughs) Just straight up. It's all, it takes a lot of-

Vasco Pedro:

Yeah.

Albert Chou:

... characters to, to fit 'em?

Vasco Pedro:

Yeah, I mean, even German, right? I mean, if you, if you translate to German, on average, your strings are gonna be 20% bigger, right? So they're gonna break a bunch of things in your websites.

Albert Chou:

There you go. So I, we were thinking to ourselves like, not only... So we, we would hire people to do it, and then we needed to hire people to like manually put it. And like you just said, we needed to use, uh, engineering team members to be like, "Well, you need to reconfig this button. You need to reconfig the layout of the page even, 'cause it doesn't fit." And it was just a big challenge, and it was, it took a lot of effort in engineering and man hours. Now, fast forward us today, it sounds like you can do this quickly. Give us an idea of what it would look like today if you were running a software operation, which Unbabel has plenty of software customers. If I'm a software operation today and I wanna translate to many different languages, tell me what the process is now.

Vasco Pedro:

So there's, there's a few changes that happened since that are having a big impact. So what would happen now is you'd, at the time that the, that you're developing things and you're creating, you know,

software, website, you're actually able to, uh, use machine translation to have concurrent and immediate translation of everything you're doing on a website as you're developing, right? So you can see how the buttons, uh, are behaving, how the, how the, you know, how the menus need to operate, even if the translation quality isn't there, is gonna give you a sense of what it looks like from a layout perspective as you build it, right?

Then after that, more and more content is being created on a stream like environment. So you're, you're constantly creating content, even a website you're updating, maybe it's not every day, maybe it's every month, but there's parts of the, the website that certainly are gonna be updated more like stuff that comes from social media or FAQs or blog posts.

Albert Chou:

Sure.

Vasco Pedro:

And so as that happens, you need to have something that, a process that enables you to continuously have things updated, right? So basically you'd have an integration, let's say that you're using your, you're building your website in WordPress, right? You'd have integration within Unbabel. As soon as you change something, your strings, everything you're doing is being sent to Unbabel, where automatically they're getting the, the entire translation process done and put back, you know, in, you know, a very short amount of time.

Now, the process itself is different because before you'd have people to go in and have to translate. What happens now is, uh, you send text, first thing is, uh, is machine translation does a first pass. And this in this case is, uh, is customer adapt and machine translation. So the, the, the AI is learning or your tone of voice as you translate the way you like to have, uh, you know, brand positioning and is trying to really nail that part, you know, formal, uh, versus formal terms, et cetera.

Then there is a piece that, uh, in Unbabel that is quality estimation, that basically tries to make an estimation of, "Hey, how sure are we that this translation is really good?" Right? And if we're like 100% sure that this is really good, great. It doesn't need a human anymore, you're done. Right? And if it you're not 100% sure, then basically that's the time that we're bringing a human to make sure that the quality is, you know, outstanding. And then the cool thing is that... Well, there's lots of cool things, but one of them is that whatever happens a- after the human immediately gets fed back to all the AI systems so that you have this feedback loop where, you know, it, the AI components are constantly learning and getting better and more efficient over time.

Albert Chou:

So give us an idea of how long it takes these models to get better and learn. Because we've had different people that work in translation and NLP technologies. And for example, we're in the customer service realm, the reality is people talk in many different ways. There's a lot of slang, there's a lot of emoji.

Vasco Pedro:

Yeah.

Albert Chou:

It's, it's, it's inconsistent at best, right? Like there, there's no consistency in standardization. It feels like business is more standardized, but it also sounds like you, the way you just described it on an industry

basis, maybe it's not right. So files like maybe an accounting company, accounting is probably widely standardized worldwide. But, uh, if I was more of a content company, like that's now a problem because content is gonna, like different terms, probably, you know, they might not translate to another language, uh, quite, quite, quite properly. Give us an idea of like, what, what it takes to learn to teach these models.

Vasco Pedro:

Yeah. So the, when you look at a, at a chat, for example, in customer service, uh, you're trying to get the model to predict what the next answer is, right? And so it starts tackling a part of AI that quite honestly no one has really solved, which is dialogue. It's like, "Okay, what's the intent of the conversation and how do I make it progress?" So, you know, 20 years ago you'd have pretty much, um, you know, the dialogue systems were almost, if then else kind of prompt you-

Albert Chou:

Yeah.

Vasco Pedro:

... You'd go in and be like, "Okay, if the person says this," then, you know, the IVF stuff that you, uh, that you, when you call somewhere and there's like automated system, it's basically the same underlying technology. With translation is different, right? Because, uh, you have, you know, way more data already, you have very sophistic language models that are able to generate that text in a different language. And so the learning process is kind of just fine tuning an adaptation on top of something that already is fairly good, right?

So the baseline, you're not trying to find a needle in the haystack. Uh, you're trying to, um, to provide the, the translation of that, of that bit of text. And you know, by comparison, there is no dialogue, right? So there is, there is, um, it's a discrete process where you're having a source and a target and you just wanna generate that while the problem with the chat is that there's a lot of context, right? You're not just trying to answer that question, you're trying to answer that question given the previous conversation that you had, and given the intent that the person arrived in that chat situation.

So translation is actually a, a simpler problem than dialogue systems, mostly because we... you know, like AI right now is very much, you know, super sophisticated pattern matching, right? It's like, "Well, I've seen this data and I can extract some, some patterns that are very sophisticated, but let me kind of, uh, that let me, um, replicate some of that." Dialogue systems, uh, are fundamentally different, right? It's, it's not about, um, replicating stuff that I've seen, but it's really, uh, how do I have a mental model of the world and try to achieve a certain goal? And we don't understand that.

So for example, we, we as humans, we do not just pattern matching, uh, but we do a lot of, um, uh, things like, oh, transfer learning, for example, right? So we learn stuff in one domain and we can apply that same knowledge into a bunch of different domains. You know, there's a lot of stuff that we can extract and apply. AI right now is amazing at pattern matching recognition of things, but it's not great at, if I've learned about a particular area, I can now apply on the different things. Like you have AlphaGo, uh, if you're familiar with AlphaGo and DeepMind, you know, when they did the whole Go learning program of AI. It, it's really good for that, but then you can't take that and apply it to a different area.

Albert Chou:

So you're talking about the game, the Go, the Go game-

Vasco Pedro:

Yeah, yeah.

Albert Chou:

... where was, was prog? Yeah. Okay.

Vasco Pedro:

Right, right. So, you know, like the, the, the, Go was considered to be an uncrackable AI, uh, problem, right? Because of the, uh, Uber complexity. And then recently, DeepMind started launching AI, uh, different AIs that play Go and beat kind of world experts. And the most impressive was called AlphaGo, which learned from zero by just playing a bunch of games, right? So learn by itself.

Albert Chou:

(laughs).

Vasco Pedro:

Uh, which was, which was really cool. But the model, once you train a model to play Go, you can't take that model and for example, use it to play chess. They're very different things, right?

Albert Chou:

Yeah. It doesn't have any other utility.

Vasco Pedro:

Right. And, but, but translation is a model by itself. It's the same task that you're doing all the time, right? So-

Albert Chou:

Sure.

Vasco Pedro:

Um, what we see is, for example, I don't know, I would say, um, if you go on MQM, uh, MQM is a, is a metric that we use in translation to understand quality. So it's like you take source and target of translation, and you have a human go in and annotate any errors according to a particular taxonomy. Like, how serious is this error? Is this a grammatical error? Is this a spell checker error, et cetera. And then based on that degenerate a score that says, "Hey, 100% means this is perfect translation," right? And then it goes down, and I would say like, a professional translation on average is gonna be between 90 and 100. Uh, and a machine translation engine, uh, would be expected to be in the 80s, you know, kind of thing.

And what we see is we can take it, uh, within a couple of millions of words with a particular customer, we can take it let's, I wanna say from just the machine translation part, from like 80 to low 90, you know, that, that kind of stuff. Uh, which, which is, you know, like, I know this seems very abstract, but, but what it does is because the, the really expensive part of translation is the human part.

Albert Chou:

Yeah.

Vasco Pedro:

Every time that you're generating something that doesn't need human translation, you're kind of like reducing 10X the cost, right? And so the problem with, uh, uh, AI systems right now is that a lot of times they don't know when they don't know. You know, like-

Albert Chou:

Sure.

Vasco Pedro:

... you ask an AI system to give you a translation and you'll never be like, "Oh, I could give you one, but I don't think it's good enough, so should get somebody else to do it." You know, you'll be like, "Okay, here's, here's my best guess," you know. And sometimes that best guess sucks, right?

Albert Chou:

(laughs).

Vasco Pedro:

And so well we've developed... (laughs) It does, right? And so what we've developed is actually a way for the AI to be able to say, "Hey, actually in this case, I don't really know, so get a human to help me."

Albert Chou:

Interesting.

Vasco Pedro:

Yeah. I mean it's, that's a really differentiating part of Unbabel. It's like, it, you can deliver high quality, but really get the benefit of all the times that the AI was actually correct, you know, which is a huge advantage.

Albert Chou:

I mean, that's fundamentally different from like anything I've ever experienced in Google Translate, right? When I would have my, uh, you know, have, when my mom was talking and I would test it and see how it would translate to, Chinese to English, you know, sometimes it didn't, it didn't, it didn't work.

Vasco Pedro:

Right. But, but it does, it never tells you like, "Hey, um, I don't know," right?

Albert Chou:

(laughs) It never says, I don't know. It says, "Yeah, this is good." (laughs)

Vasco Pedro:

Right? But it, it's actually a general problem with AI right now, is that it's very rare for AIs to know when they don't know. And if you apply this to things like, "Okay, give me a risk analysis for, uh, assigning someone an insurance rate," right? It will give you something, even if it's not very sure-

Albert Chou:

(laughs).

Vasco Pedro:

... of, of the certainty of that, right? So having this ability for AI to say, "Hey, there's stuff that I'm pretty confident that I know, and there's stuff that I'm not," is something that AI right now don't do. And it's fundamental to have that interaction between AI and humans.

Albert Chou:

So how fast does this process occur now? So for example, I don't know if you have any benchmarks that you can share to give our audience a framework of how fast this works. Like, uh, like it can translate this many words per minute, or it does this many pages per hour. I don't know how it, how do you measure its, uh, accuracy and speed?

Vasco Pedro:

Yeah. So, so the upper limit on the AI stuff is, you know, like it's pretty much instantaneous. So it's like 0.1 seconds-

Albert Chou:

Like almost real time?

Vasco Pedro:

Yeah. I mean, we use it for real time chat, right? So it's-

Albert Chou:

Wow.

Vasco Pedro:

... definitely, uh, like it's, it's real time. If we talk about number of words that we process here right now in Unbabel, we're like 3.5 billion words. So it's, it's not super gigantic, but compared to a normal translation company is like, you know, in order of magnitude bigger.

Albert Chou:

And then for yourself, you know, we did a little homework. We do a little homework on all of our guests, and we can see that you've been interested in language, in engineering of language. It looks like since 1995 you went to the University of Lisbon, studied language and knowledge engineering. I don't even know what that is. Uh, you got your Masters of Science at Carnegie Mellon Language Technologies, and you got a PhD from Carnegie Mellon in language technologies. So it feels like you've been trying to solve this problem since possibly when you were a kid. Give us an idea, when did you think, "I wanna solve this problem?"

Vasco Pedro:

So, you know, so my, my mom is not retired, but she was a professor, professor of English linguistics. So it was kind of like, I grew up with language as a thing, you know? And I think the thing that always fascinated me really was consciousness, like deep AI problem of what is consciousness? What is intelligence? How do we interact with it? And I think language is just such a great window of, and a great perspective to looking into intelligence and consciousness that kind of, you know, when I combined with my environment, it drew me in. So I started coding when I was six-

Albert Chou:

Six?

Vasco Pedro:

Um, I was, you know, the s- Yeah, yes. You know, ZX, the spectrum 48K doing basic, uh, you know, at the time that you had games with tapes that you had to like play them and you'd code this games and you'd like run these things and you'd take your five minutes to know even if there was a bug, which inevitably there was. And, you know, bug, debugging was a pain in the ass.

Albert Chou:

(laughs).

Vasco Pedro:

It was, it was kind of cool. And so I, I kind of always knew that, uh, for me, computers were just such a great window to study and model topics that were interested to, interesting to me. When I got to college, uh, the knowledge and language engineering was, it was kind of like, it's a major in artificial intelligence with the minor in competition linguistics. And so it was the, the basically the pretty much what I was doing, what I ended up doing in master's and PhD, but at a undergrad level.

Uh, and so I was really lucky because I got into that course... The cou- course basically existed for 10 years. I got in the second year that it existed, and then after I left six years later, they stopped giving it because it was in two different colleges, and there was a lot of administrative hassles, and it was all of this issues. And then, you know, I managed to get, get into, uh, CMU and, uh, the language technology department at CMU was really way ahead of its time. You know, the, the scale, the size, the kind of stuff that we're doing, uh, was really incredible.

And so for me, you know, even though right now I'm, we're focused on translation, the, the problem that, uh, was always more appealing to me was semantic processing was kind of, once you go beyond the surface area of the language, and you start dealing with concept kind of, how, how do we actually express thinking in language? That was always something that fascinated me.And I, and I think that there's... we know very little, I mean, to be honest. Like we, we, we have some ideas, but there, it's not by any means a solve problem. Like, how do you think, you know, like what is that thing that, you know, at every given time, you're, you have this massive parallel thing happening inside your brain, you're like, there's, right now you're talking to me and there's your, your eyes are getting visual input and maybe you're hungry or cold or hot, or, you know, and there's like preconceptions and, you know, maybe you're not feeling so well because there's a cough something, right?

Albert Chou:

Yeah.

Vasco Pedro:

There's all this stuff happening and your body is managing, your brain is managing your body and your breathing, your heart is beating, and all this stuff. Somehow, you know, this super parallel, Albert becomes serialized into the consciousness that is Albert that is like, I'm one being, right? And so what happens in that moment, right? And, and I think part of that is when, you know, the, the things that made you conscious are also typically thoughts that are expressed to some sort of language, even if it's internal, right? And, and depending which language you are using, like if you're using Chinese or English to think you can express different capabilities, you know, it's like-

Albert Chou:

Yeah.

Vasco Pedro:

... each human language actually gives you different capabilities to think, right? And so it seems like language, it becomes a bit, this scaffolding of thought and somehow really influences your ability to create consciousness. But we don't really know how, you know, how this, how this happens or exactly what comes first and what actually drives it. So it's, uh, for me it's super fascinating.

Albert Chou:

Yeah. The way you describe, it's almost like philosophical metaphysical, in addition to the computational science that's behind it. Uh, all these things that have to be true-

Vasco Pedro:

Yeah.

Albert Chou:

... for someone to understand what they're, they're reading or understanding.

Vasco Pedro:

And, and in fact, like there's, there's a bunch of, there's this weird thing happening with language, which is, uh, there's a, a, a Dunner, Dunham Kruger effect. Uh, is this, there's, there's a lot of applications of this, but one of them is this idea that when you're really an expert in something, it, it, it's easy for you. And so you tend to think that it's an easy problem because you've mastered it.

Albert Chou:

Mm-hmm.

Vasco Pedro:

And, and language a bit like that. We've been speaking since we're one, right? And so we think, "Well, everyone speaks, so it's kind of an easy thing," but it's a really complex thing that we do, our ability to deal with uncertainty and to deal with noise and our ability to switch topics and to... Like, it's incredible. But we just don't perceive it as super hard, right?

And, and what happens is we kind of aren't under appreciating some of the things that are happening in language. Like for example, you know, we, uh, all the stuff we're seeing on the political spectrum with

polarization is a bit a consequence in my perspective of overabundance of information for which language actually plays a part in the sense of, um, you know, for example, so in the '80s, Japan, uh, a lot of people in Japan used to, uh, it used to be very popular to go and do a master's in the US. You know, it was, there was-

Albert Chou:

Sure.

Vasco Pedro:

There'd be a lot of Japanese students in American universities. There's very, very few right now, right? And, and even pre-COVID, you know, and the question was why? And there's a certain perception, once you have an access to a huge abundance of information, there's just a less of a curiosity to go outside the stuff that you are already sitting in, right? And we see this in the polarization of politics or ability for people to just, you know, read stuff that creates an echo chamber about what they know already, right? And so that leads to lack of curiosity of exploring and being faced with, uh, a diversity of opinions and a diversity of languages.

So even though we are in this global world where the expectations that companies are present, uh, the, it's also leads to people really expecting that everything happens in their own native language, and actually people being less willing to function and operate under their lives in a language that they're not comfortable with, right? Which is... Yeah. As you can see, I, I tend to, uh, get a bit excited about language. So (laughs) apologies for that.

Albert Chou:

Uh, no, I, I, the, the things you think about are clearly on another, I would say another level or another dimension of what I think a regular person might think about (laughs). And the fact that you've been focused on this since, like you said, possibly six years old, pretty name fascinating. When you were thinking of this, when you, this is all coming together, you're now at Carnegie Mellon, you're seeing all these different projects you described as huge in massive scale. Did you already have the picture of Unbabel in your mind? Like, did you think that, "I'm gonna translate business language across the world?" Or what were you thinking about prior to starting Unbabel, and then ultimately what led you to start the company?

Vasco Pedro:

So Unbabel is my fourth startup. Um, I think when I kind of started being more, uh, consciously in the entrepreneurial track, let's say, I was actually doing an internship at Google, and it was fascinating. I mean, loved that it was amazing. It was, uh, the time I described it, you know, it was Mountain View and it was la-la land for developers. You know, like, you get everything you can p- like, think of in- problems with, that require infinite resources in a place that you have all you can think of, right? It was great.

But one thing I did feel was I didn't quite have, it was very hard to have the... You know, you're, you're surrounded by incredibly brilliant people. Um, you know, and, and, you know, Guido van Rossum joined Google, when I was there, the guy that created Python, it was like, "This is insane, you know."

Albert Chou:

(laughs).

Vasco Pedro:

But at the same time, the probability of having an impact was very small.

Albert Chou:

Yeah.

Vasco Pedro:

And I always felt like I wanted to do things that had an impact. And so I started thinking about like, what were interesting problems for me to do. And the first startup I did was actually more on, uh, a direct application of the stuff I was developing for my PC thesis, which was more on semantic processing and reasoning. And then that kind of got bought by another startup, and then, uh, I moved back to Portugal. And, uh, the idea was for me to create a technical team for that second startup, which I did.

And then I ended up joining a third startup as a co-founder. And then some of that team came with me, and then we kind of realized, "Hey, we wanna build something together." And one of those people was my now co-founder and CTO as well. And he had finished his PhD at UPenn in machine translation. And so we started, you know, like, that started really spurring a lot of very interesting conversations about stuff that we're both passionate about and where NLP was going, more of the big issues to solve. And kind of, that was eventually what led to Unbabel, was those conversations. So it took a little while.

Albert Chou:

What was the first sign that you were building something that was gonna be useful?

Vasco Pedro:

I think, uh, so (laughs), you know, the, the initially we said, "Look, let's..." We just wanted to create a prototype and see can we actually make this work, right? Can we get a machine relation engine and, and humans fixing that? And can we have this loop working? And we work our butts off for like two months to just, just get something to work.

And, uh, we, um, we ended up having some, uh, meeting with an investor, and it was just supposed to be a coffee, right? And it turned into this whole like, "Oh, give us your pitch, and how are you gonna make money?" And, and we came out of that really disappointed feeling, like, "Oh man, we don't, we don't have a clue of what we're doing." But then, uh, you know, a few months later, like a couple of months later, we got into Y Combinator and, and we get there and we have this amazing interview with, um, Michael Seibel and Jeff Rothstein and, uh, Garry Tan and, uh, Sam Altman.

And they totally got the problem, right? It's like this massive problem. And, you know, we got in and it was like, "Okay, I mean, like, like, there's something to this," right? And then right after that is when we started having first customers. So we get in and I think Pinterest was our, one of our first customers. And it was like, awesome. Like we were talking to people that suddenly could connect to the problem we're solving and saying, "Okay, this is actually kind of interesting." Of course, we were very naive at the time, and we thought we understand the problem, which we really didn't. Uh, but, you know, took, took a little while to kind of get to the, to a more insightful understanding.

Albert Chou:

Well, I mean, you seem like you and, uh, you and your co-founder seem like the type of people that can continuously solve problems in this domain, given your lifelong study and dedication to it. When you

were developing this, you know, you mentioned you got that roadblocks, like, hey, you didn't quite understand the problem. What was it that you didn't really understand? And then I guess, how did you solve that?

Vasco Pedro:

Yeah, so it's a very basic, uh, in hindsight issue that I imagine a lot of startups do, which is... You know, and, we came from the AI side, and so our assumption was like, "The hard part is the AI stuff. Uh, and then if you add humans on top, it's easy." Right? But turns out that building a marketplace that has a new human component on top of that has its own set of challenges. And actually there is, uh, you know, in order to deliver quality, especially because when we started, machine translation was barely usable from a, you know, enterprise perspective.

Albert Chou:

Sure.

Vasco Pedro:

So you always needed a human on top.

Albert Chou:

Yeah.

Vasco Pedro:

You know, like 100% of the time. And so we thought, "Okay, well we just, you know, we focus on the AI, we add humans on top, great. We provide quality." It turns out actually delivering enterprise level of translation quality was really complicated. And I think we would've totally, uh, saved, I don't know, at least a couple of years if we had spent like two or three months just sitting with the translation agency and understanding kind of like, how do people actually do it right now? Rather than imagining how it is and going from that perspective, you know. I think there was a certain Ubers of like, "Oh, we got this. We understand this problem," and there's just parts of delivering a service to customers with expectations on an enterprise level that we didn't understand, you know.And it took us a lot of, like bump- you know, butting our heads against the wall and, and trying and, and getting some customers that were pretty annoyed and, and upset and saying like, yeah, the first to understand, "Okay, like this, this is actually harder." This part, we end up spending a significant amount of time, the first three, four years just on how do we actually create, uh, the tools to, you know, to create, manage and optimize a community of humans to do a particular task. So around all like, management of humans and, you know, and then specifically to the task of translation and how do you actually give, create an interface for humans who translate that is, you know, that is great and it provides the right output and the result of this, like human management issues that we needed to sort.

Albert Chou:

Yeah. And then for yourself, what was the, I guess what was the turning... 'Cause like every, every company has like that like turning point customer or period of time where things just start kind of getting some scale or some capability. It usually starts with just, you know, a lot of people I've talked to say it starts with one happy customer, and this customer said this. I didn't know if you had a moment like that where you were like, "Wow, okay, now we've, we've, we might have figured this out."

Vasco Pedro:

Uh, so curiously, I think it was during our series A, halfway through our series A, we, you know, we were looking, I, I was seeing, I was hearing from the team, the team was, was, especially the customer service team was saying, "Look, we're kind of overwhelmed." And, and there was a lot of customers that weren't very happy. And I was like, "Okay, well, why is that?"

So I started looking at KPIs, I, not just me, the whole team, but we started looking at, "Okay, so where are, which customers do we have," you know, the highest margin, "which customers are happier, which customers, um, you know, actually have a lot of stickiness and stay with us?" And what we realized was that, well, there was a use case in customer service specifically that had a lot of interesting traction. And mostly because until we started, uh, deploying translation to enable, uh, multilingual communication in agents, you really couldn't do that.

You, you, you know, um, you basically had to hire people that speak a bu- that spoke a bunch of languages. And, uh, the, the challenge with that was, you know, the translation, uh, solutions were too slow. So you couldn't like-

Albert Chou:

Sure.

Vasco Pedro:

"Okay, I'm gonna translate an email that's gonna take me two days and it's gonna cost 10 bucks." Like it doesn't make sense, right?

Albert Chou:

(laughs).

Vasco Pedro:

Right. And so suddenly we could see that we would deploy, like we integrate with Zendesk, and we would deploy, uh, our integration into a customer service team. And suddenly you'd have, you know, a team of people that spoke English can suddenly interact with customers in like 30 different languages, right? And they were super happy. And so halfway through the series A, uh, we've decided to like, fire 70% of our customers at the time and be like, "Let's just focus on that."

And I thought, "Okay, like, this is gonna be interesting because, you know, we're now gonna go to investor and say, "Yeah, you know, remember we had all of that revenue. We decided to just have," like, I think we went from like a million AR to like 200 KR, right? And it's like, we're tiny again. And I thought, "They're gonna tell us to take a hike." But actually, especially the, the Notion Capital ended up leading our series A, uh, Chris Tomlin was like, "Okay, actually I think you have something there." I mean, like, we started deep diving into, uh, the different KPIs and stickiness of customers and kind of that started painting a picture that, "Hey, we've found our first beach head, right, our where we needed to start. And so that's-

Albert Chou:

Yeah.

Vasco Pedro:

We just doubled down on that.

Albert Chou:

That's awesome. That is awesome. Now, give us an idea of where the company is at today. You know, we can see on LinkedIn, for example, there's over 800 employees, and you are already hinted at it because globalization is not going away. We're gonna continue to grow. And you kind of alluded to this a little bit ago, which is they're possibly in, so not just Japan, maybe other societies where people are becoming more, sounds like inward facing, is that a way to describe it? Like they're-

Vasco Pedro:

Yeah.

Albert Chou:

... they're wanting things more in their language, which is gonna create even more demand for translation services. And I know that almost every company is trying to, you know, update their service offerings faster, closer to customer experience. All these different things require some form of communication typically, gonna be text. Give us an idea what the, like what's gonna happen the next five years, you think? Because this idea of globalization is, is not going away.

I mean, especially I think about like workforces, because we had deal on our show once earlier, which is talking about international hiring. They're saying international hiring. They've like basically solved it. And like now more and more companies are gonna, instead of hiring remote workers, you know, remote inside the United States, they're gonna do it by time zone.

Vasco Pedro:

Yeah.

Albert Chou:

So any country in their time zone, it's gonna be hired. And, um, so I'd love to hear your perspective on what do you thinks gonna happen in the next, let's say five, five years?

Vasco Pedro:

So I, I, I think the, there's kind of three parts of this problem, right? And, and if you look at the market, the market of translation right now is worth, you know, depending on, on which, uh, uh, study, but let's say between 30 and 40 billion, right? So it's, it's big enough, but it's very fragmented.

Albert Chou:

Sure.

Vasco Pedro:

The biggest translation company in the world does about a billion. Uh, right? So it's like a tiny part of the market. Um, and part of the reason is because the problem is very complex, and it has three subparts, which one is, "How do I actually get content in and out of places? You know, like if my agents are using Zendesk, how do I actually get that stream of text? But if I'm using Mailchimp, if I'm using WordPress,

and there's a thousand different places in the world where content is being created and consumed from Slack to social media to-

Albert Chou:

Sure.

Vasco Pedro:

... you know, like Salesforce to a bunch of stuff." So one part is, "How do I get this in and out in a seamless way that doesn't require painful effort from users?" Maybe the most obvious thing in, in there is like websites, you know, websites, they're typically the first thing that company does to go international.

And also probably the most painful because, uh, website is an amalgamation of things. You know, it's like you have stuff like you mentioned, like menus and buttons, but you also have stuff that lives in a database that describes, you know, um, different parts of the company or the product, and then you have stuff that lives in CRMs that are, maybe it's FAQs. Then you have stuff that lives in social media because you're in a pool, your stream of, you know, tweets. And then, you know, there's all of this stuff happening. And if, right? And if you want to have this in multiple language, you have to, to deal with all of this, right?

So that's a big problem. How do I get stuff in and out? The other is, how do I actually translate the thing? You know, how do I actually translate it in not only a fast and efficient way, but something that generates high quality and that is, continues to get better and better over time, right? So that's, you know, in a, in a cost effective, high quality, uh, fast way. And then the third is, what we see in companies is as soon as the problem becomes complex enough, and it very quickly does, because once you go beyond, you know, one language, what companies need, they always end up hiring someone that is the accountable person for delivering the translations, right? So it's either localization manager or international vision manager, or global issue manager.

A lot of times they, they report into marketing or report into product, or, but someone is the person that says, "Hey, you go figure this out." Right? And it's super painful, right? They end up using vendors, or if they're in, in product, a lot of times they'll hire a bunch of translators in house, or if they're in customer service, they're gonna hire native speakers, or, there's all this, you know, solutions.

So you need to really bring all of this together and have a platform that enables you to very easily get content in and out of all the content systems that you use to have a, you know, a underlying process to translate that is efficient and scalable, and a tool on top of that, it enables the person responsible to be able to do it in, and have agency and have visibility and transparency and kind of, you know, be able to improve stuff over time.

So I think there's a few companies that are on the race for this, right? And I think we're leading that charge, but we're not the only ones because is a big problem to solve. I think someone in the next five years will solve it, right? I, I mean, hopefully I think it's us, but, but I, you know, I think someone will solve it. And I think the impact of that is that you're gonna see companies, um, just at some point, uh, language is gonna, it's, it's almost about becoming language agnostic. It's like, "Hey, you have a product that is digital and should be used by entire world?" The entire world should be using it, right?

And if you think about the impact of that in terms of product market fit, you know, there's two ways of getting product market fit, right? One is change the product, and the other is change the market. If you go from a domestic market to a global market from day zero, how many more products will actually become successful, right? Uh, it's a bit like, if you think about it in a different, uh, use cases like writers,

right? I would say that, you know, probably you'd have a ratio of number of good writers per, you know, a thousand people in a population, right? I mean, that amount is probably doesn't vary that much. You know? So meaning-

Albert Chou:

Mm-hmm.

Vasco Pedro:

... if you have, let's say, 1000 good writers in the US you should have, you know, 10,000 good writers in China, right? But yet how many famous Chinese writers do we know? Right? It's like-

Albert Chou:

Um, no idea. Very few.

Vasco Pedro:

Right. You know.

Albert Chou:

I was thinking, when you were saying that, I was thinking of like, "Uh, there's probably someone right now, I'm just gonna make this up cause my wife just went there in Iceland, who can tell a story on the scale of Game of Thrones level," but because they can only write in Icelandic, no one knows. (laughs)

Vasco Pedro:

Yes. Right? Exactly. And that is true for all content creators, right?

Albert Chou:

Yeah.

Vasco Pedro:

For, uh, musicians, anything that has to do with creating something around language, you know, and I think that's, that's gonna change quite a bit. It's a bit like we're seeing a huge, uh, shift beginning with all the AI creation stuff with, uh, you know, Dall-E and Stable Diffusion and all the other stuff that, that's coming out. I think once you solve the language in a way that it's really scalable and easy to use, you're gonna see an explosion of content, not just from English based primarily authors, but from, you know, way more people around the world. And I think that's a very exciting world to be in.

Albert Chou:

So I agree. I listening to you hype that up, I'm thinking of the same thing, but I also kept thinking about the prompt you said, which is how do you get all the content then? That's sounds very difficult. (laughs) Like, like you said.

Vasco Pedro:

Yeah.

Albert Chou:

Just a simple e-commerce website, which we I agree, every shipping and fulfillment company is trying to make it easier so that if I make hoodies, I can sell my hoodies anywhere around the world. But you just said it, my supply chain is in one system. My customer records in another, my im-, you know, my display layer is another, my email marking is another, like, it's, it's everywhere.

Vasco Pedro:

Yeah. Right? So, so you need to have a broad amount of integrations. I think, for example, what we're, a pragmatic solution, uh, reminds you a bit of... and when we started building websites, right? In- internet, like let's say '98, 2000, you started having this concept of a lamp stack, and it was this idea of like-

Albert Chou:

Yeah.

Vasco Pedro:

"Hey, you can build websites in a thousand different ways, but if you use this set of tools, you know, um, my SQL and Linux and PHP and like, just makes your life easier."

Albert Chou:

Yeah.

Vasco Pedro:

"And so here's a well defined, easy way to do it that makes your life easy." We have, we don't have a lamp stack for globalization, you know, like, "Okay, look, if you use Zendesk and Marketo and you know, WordPress and so on, like, here's five things that cover all of like, you know, an e-commerce platform, and if you use this, they're all super well integrated and they work seamlessly in a bunch of different languages." Right?

I think that's, that for me seems like, uh, a useful stack to, to go. Right now it's still pretty much like you do whatever, but you never think about globalization from the beginning. And so it's an afterthought. And either you have, um, something like Zapier where, you know, a Zapier for a translation where it's like, "Hey, every single thing you can possibly think of, there's an integration and just makes the process easy." Or there's a, you know, a recommended way of doing it that just makes it everyone, uh, super easy to do.

Albert Chou:

Well, it sounds like you... I'm not gonna, I'm not, I don't know what you're going to do, but it sounds like you guys are gonna try to develop something at the code layer, uh, that, that, you know, like a framework. (laughs) If I'm writing a website, developing applications, I can use your framework and it's gonna have it built in. I mean, this is what it sounds like what you're doing (laughs).

Vasco Pedro:

Yeah. I mean, yeah. And, and the thing is, it's, it's weird because people that work in, uh, in translation and language and deal with language type companies, it's a very technical area. You know, it's like, it's, i- you, it's quite, honestly, it's very like, very geeky people, like really passionate, you know, they go into

like massive, uh, rabbit holes on like, how do you do this properly? It really reminds me coming from both of these worlds of, you know, developers and language geeks, I can see a lot of the parallels, like, "Wow. Like it's the same level of depth and, and passion."

But a lot of times people in localization, they don't code, right? So you kind of need to provide them... Like, I, I think we're seeing the beginning of a trend, uh, that we're seeing in other, other areas, which is kind of how do we get MLOps to bring the ability for machine learning to people that aren't coders, right? And, and I think that's the other piece of this is like, we need to, if we're gonna enable small teams to scale globally, you know, to help the company scale globally, cross languages, the tools themselves need to, uh, provide that capability of AI to non coder, right? So, which is something that we're just beginning to explore, but I think is gonna have a lot of impact in different areas.

Albert Chou:

Well, Vasco, man. I wanna say thank you for joining us today on IT Visions. Man, Hearing the way you describe the future, it just seems so exciting because I think the future you describe is what everyone wants to get to, of course. But that language, barrier, is a huge one. And it's pretty cool hearing, uh, how you're attempting to solve this problem. Um, the way you describe unlocking content creators around the world, I mean, that's going to benefit everybody.Actually it's not going to benefit everybody, you're, it's gonna transform societies when, uh, you know, someone in Sub-Saharan Africa has the same ca- like who might be in a magical writer can tell a story that can transform a community almost overnight. You know, that is gonna be an unbelievable event when it starts happening. Vasco, I wanna say thank you for joining us today on IT Visionaries. Uh, but before you go, it is actually time for one final segment, and that's the lightning round. The lightning Round's brought to us by Salesforce platform, the number one cloud platform for digital transformation of every experience. Vasco, this is where we ask you questions outside the realm of work so our audience can get to know you just a little bit better. You ready?

Vasco Pedro:

Yeah, let's go for it.

Albert Chou:

All right. I gotta know how many languages can you speak or read (laughs)?

Vasco Pedro:

Five.

Albert Chou:

Five. Which ones?

Vasco Pedro:

Yeah. Uh, Portuguese, English, Spanish, French. I ki- I, I will survive in Japanese and I do a bit of Greek.

Albert Chou:

Okay, so you're not only in the romance languages? All right. So that is, that is, that is pretty darn cool. Which of those languages are you best at?

Vasco Pedro:

Oh, English and Portuguese.

Albert Chou:

When you think of language, you're probably also a traveler. Are you a big traveler?

Vasco Pedro:

Yeah, I love traveling.

Albert Chou:

Where are places that you've really enjoyed going or recommend or would want to go back?

Vasco Pedro:

So, um, depends what you're looking for. So I love, um, if you're looking for beaches, Maldives, Bora Bora. I think Philippines have been, like, I love diving and there's incredible diving in, diving there. Philippines is kind of interesting because it's, you have that Southeast Asia flavor, but it's, uh, not, it's very different than, you know, than Vietnam or Thailand or, or, you know, like there, it's a, it has a unique kind of, um, ecosystem, which I really appreciate.

I think from a nature, pure nature perspective, actually national parks in the US are just incredible. I, you know, I've, for some reason, like I just got lost in it and it's really amazing. I think for, um, the kind of like, uh, one of my favorite places for vacation is Greece. Uh, there's a certain tempo to the Greek Islands that are just incredible for relaxing and for like, just, you know, getting lost in that Malouines. Um, what else? I haven't been much to Africa, which I really wanna explore. Uh, Japan is incredible. Like, it's, it's one of the places that, you know, it's both super safe, super organized, but it really, if you're coming from Europe feels very different, right? But in a very exciting way. Uh, so highly recommended.

Um, I mean, China right now is pretty much closed, but I loved, you know, visiting China. It, it really opened my mind to this, like, where is the future headed? You know, like the first time I went to China, there was a sense of, "Oh, China's kind of catching up to the US." And when I was there I was like, "Holy crap. No. Like, the US hasn't realized it, but actually China caught up to the US in a lot of ways already-

Albert Chou:

Yeah.

Vasco Pedro:

... and they're like way past it, you know? So that was really exciting as well. (laughs) Uh, there's just so much to see in the world. It's, um, it's one of my favorite things.

Albert Chou:

Yeah. I remember the first time I walked into, uh, Singapore and I was like, "I think I'm in the future." (laughs)

Vasco Pedro:

Yeah. Singapore is great.

Albert Chou:

Yeah. (laughs).

Vasco Pedro:

Absolutely.

Albert Chou:

I was like, "I think I literally walked into the future." (laughs)

Vasco Pedro:

Yeah, it does feel like that, right? It's crazy.

Albert Chou:

Where are you currently based?

Vasco Pedro:

So I split my time between Lisbon and San Francisco. Uh, pre-COVID I was about 50/50, during COVID I mostly stayed here and now I'm kind of resuming traveling. Unbabel now has offices in pa- different places, so I kind of also need to spend time with the team in each of the places. So kind of varies.

Albert Chou:

Yeah. That sounds awesome. Well, listen, Vasco, I had a, I had a good guess and that you've confirmed that you are a world traveler. If you're a lover of language, you're probably a lover of places. So that was really great hearing your recommendations. I wanna say thank you for joining us today on IT Visionaries man. I love... the way you, like I said, the way you paint the picture of the future is just so exciting. And I agree with you. There was, um, and this might be more philosophical, but I, I wanna mention this. One of the things I was mentioned to me by professor, and I remember reading segments of, I don't know if you ever read the book, Guns, Germs and Steel?

Vasco Pedro:

Uh, no I haven't.

Albert Chou:

So, Guns, Germs and steel is about the development of societies and it talks about those were the three major impacts of whether or not your, where you were born, such as Europe could develop into a modernized nation, whereas places like Africa didn't, didn't develop as quickly or didn't, unifies quickly. Um, arguably still in that process. But one of the, one of the chapters in it, and one of my professors talked about it, was this idea of language and the fact that in Africa there is the largest amount of different languages which probably prevent, prevented, um, you know, learning, peer-to-peer learning, peer-to-peer communication.

Of course this is changing very quickly, but you know, it, it talks about how developed nations, they kind of had a standardized language and or the romance languages. It was easier to communicate back and forth with each other. So it would, played a part in developing governments, societies and things like that. And I was just thinking about like, you know, you mentioned the world might be closing itself off,

but you know, maybe if it was easier to communicate you could reopen it up. So I think there's a lot of things in what you're saying.

Vasco Pedro:

Yeah, I mean like if you think about the whole Tower of Babel in the Bible is described as the moment where languages appear, right? And this idea that humans are building this tower that would reach heavens. And so when they speak the same language, they can do anything, anything is possible. And then, you know, God creates a bunch of languages so that they can never build something that threatens the heavens, right? So this idea that-

Albert Chou:

Yeah.

Vasco Pedro:

... actually if you all speak the same language, there is no limit to what we can do together.

Albert Chou:

Yeah. And so this is like a way to do both, right? It's a way to communicate, everyone communicate, but also preserve a piece of your culture.

Vasco Pedro:

Yes.

Albert Chou:

Which is something that people that speak languages very much want to keep. I remember my mom only talked to me in Chinese 'cause she wanted to make sure I could understand it.

Vasco Pedro:

Yeah.

Albert Chou:

And there's, there's a lot to that. So, I mean, I think you're hitting on a lot of things. I also gotta say, 'cause this is a fun thing. I mean, I don't have anyone else to verify this, but you gotta be the, the handsomest language scientist there is. I mean, you a good looking dude. (laughs)

Vasco Pedro:

Thank you. Thank you, Albert.

Albert Chou:

(laughs) Aw man. Yeah, you gotta be, like, I'm pretty sure like when you walked into the room they're like, you in the wrong place, man. Like, like... (laughs)

Vasco Pedro:

That's very kind of you.

Albert Chou:
(laughs) Vasco, is awesome. Thanks for joining us today on IT Visionaries.

Vasco Pedro:
Thank you Albert. It was great. I really enjoyed it.