# SuperCharged Podcast

## The Future of Health Technology with Dave Court (CTO of NES Health)



Harry Massey: Welcome to the Supercharged Podcast, where we help you to enhance your energy, health, and purpose.

Wendy Myers: Bioenergetics is truly the future of medicine.

Harry: 00:00:30 Imagine having a body charged with energy and a mind quick as lightning. Is that a superhero? No, that's you, supercharged. We'll be talking to experts who have studied the physics of life so that you can have energy for life. Welcome to today's supercharged podcast. Today we have a rather special, special guest. Stunned silence. It's a special guest because it's the one and only Dave Court who if you're in the NES world, you may not be. But he's actually the Chief Technology Officer of NES. And well, Dave and I have worked together for 11, is that correct?

Dave Court: Nearly 12. Nearly 12.

Harry: 00:01:30 Nearly 12 years. And Dave is really the brains and basically responsible for all of the cloud software and technology that NEW puts out. And the two of us are very excited about a whole, whole ton of stuff that we're doing in the decoding the Human Body-Field arena and in all the machine learning. And so we just thought we would have a conversation because we have the most interesting conversations all the time. And of course, they're never recorded. So we thought we would just have a conversation today and record it and share some of the exciting advances in this field without going on and will appear on your screens. Well, let's start with a really basic thing. What the hell is machine learning, Dave, because probably no one even known what that means.

Dave: Yeah, absolutely. So obviously, I try and do things in analogies is sometimes the easiest way to understand. And the way I explain machine learning to people is that when you have a child, if you're a parent and have a child and you teach

them things. So when a child first sees a banana, let's take a banana, for example, they don't know what a banana looks like or what a banana is but their parent says to them, "Hey, here's a banana, have a banana." And then another period of time they see another banana and then recognize that although it's a different shape, it's a banana. And really, in a nutshell, that's what machine learning is. It's a computer learning kind of objects or data patterns and initially being told what they are. And then over a period of time, it's able to identify that if you then show that child a new banana that they're never seen before and not prompted by the parents, they know it's a banana. It's a very simple thing but that's the principle of machine learning, it's a way of-

Harry: 00:03:00 Okay, cool. Maybe we should keep going with bananas. So in biology, there's so many bananas inside you. Maybe I'll put it in a different way. But biology, I mean, if you look at the three branches of science, you've got physics, chemistry, biology, physics and chemistry, they're complicated but they also have pretty defined rules and they can be understood at least ... Yeah, well, they can be understood pretty well. When you get into biology, we know pretty much nothing at this point. Is say know nothing but it's just infinitely complicated and I mean, the gene end isn't understood fully, the epigenetic end isn't understood properly, the field end isn't understood properly, the chemistry and all the interactions that are going on in your body aren't understood properly. The effect in the environment aren't understood properly. The structures of all the organs, the shape aren't understood. You mix all of that together and you can see it's just infinitely complicated. And our poor little brains, basically, just aren't really capable of understanding all of that not very well. We have some great theories of health and healing and hopefully, bioenergetics has got some ... made some impact in there. But that's really the benefit of machine learning, isn't it?

Dave: Absolutely.

Harry: Because it can just look at all of this data, and hopefully ... Well, not hopefully. It can recognize and see patterns that our mare minds cannot because we just can't hold all that data in our heads.

Dave: Yeah. I mean, definitely. I mean, that's the reality of it is that you've got world experts in certain areas that will be able to identify patterns and such as a starting point. But A, those people aren't replicable on mass scale, and B, they just don't have the time resources to be constantly investigating. And imaginary on machine learning is a big topic because even with cell structures of cells that have gone wrong and things like that, they're really starting to use machine learning to say, okay, this, this is a pattern of a cell that isn't working as it should. It doesn't look right. Getting the machine to learn all of those patterns that are incorrect and then letting it go off. And then from them, from the learning it's done, it can then start to identify new ones. And I think from a healthcare perspective, the exciting thing is consistency. So whereas you might have a great doctor in one place who can identify issues going on, there might be a doctor that hasn't had the training, the expertise, and therefore, you get

that real differentiation where is with machine learning, there is a consistency there. It's drawing from knowledge across a whole sphere of professionals and across the globe. And actually, in reality, we become better at identifying issues going on. And I think that's the most exciting part, is we're really going to see a sudden spike in knowledge, in health, and diagnosis going forward.

Harry: It's going to be interesting. I mean, as well as … who knows what's going to happen. But there's also because data is ... Well, actually, we're getting to understand and map out more data almost infinitely. I don't know which will outpace the other, our understanding of the data or the data keeps getting so much larger that we still don't know. But either way, we're going to learn more. Either way.

Dave: Yeah, definitely. I think that's a key thing that artificial intelligence machine learning has been around for a long time. Google employed their first machine

00:06:30 learning person back in the late '90s, early 2000s. The big difference we have now is the amount of data that's being made available, all the medical systems, all the health systems. They're all being put online and therefore, that term big data that people use is why we're able to exponentially really increase the speed of our knowledge because we've got access to so much more materials you learn from. It be like taking a caveman who's aware of his surroundings versus modern-day man who has every-

Harry: Is that your man cave, by the way?

Dave: It's not my man care, it's my man dining room.

Harry: That's all good. Your man cave's the garage, isn't it?

Dave: … and it could be my AI testing.

Harry: I think, you know, what's also interesting from a point of view is like on the research end, it's we built the NES bioenergetic research. Well, it's originally

00:07:30 using this physics concept that we call matching or you could it resonance. But we were basically matching all these different samples up with different parts of the body and different samples to sort of build up this picture of what's going on which was a really great work. It's actually a really, really great technique so it can cut down on a lot of other types of experiments to find the answer. But the next level, yeah, but that's what's so exciting for us is because the next level of it is that we can do it through machine learning. And well, maybe we better ... I think, yeah, we should probably describe some of the data end because it's sort of interesting, actually, because the medical world, it's sort of had ... All of their data is actually really siloed and it's actually quite early stage. It's strange. It's like beautiful. All the blood sample companies and all these companies been doing blood tests, believe it or not, they do not ... They've got all the patient's blood results. But do you what? They don't have any of the data that says what

on earth was going on in the people. And then in the doctors' office they might have some patient records but it's not correlated to the tests.

Dave: Exactly.

Harry: And hospitals have got the same thing with all of their x-rays, it's not correlated to the patient records. So unfortunately or unfortunately, it's very unfortunately, at the moment all of that data is not like ... because the data of what's going on in people is not matched up. It's actually their sort of client and their health history data which is- well, no, yeah, I was just finishing a sentence. What I was going to say, which is really what Dave and me being sort of discussing and what NES is basically taking on. It's like, well, you know, if we want to decode the body field and also see what are the best ways to get people better, well, we need to collect all of the client data, their history, what's actually happening from month to month, and of course, all of the field data. And then when you have that, well, I say the totality, we're not in NES space be going ... we're not measuring the biochemistry and we're looking at the bio-energetic field. But yeah, but when we collect that totality of the data, well, a number of things should occur. One, we'll be able to increasingly know what's going on with people. Two, we'll be able to see the best paths, well, the best path to get them better and free. We'll obviously know what the outcomes are, know what's working and what isn't. Anyway, yeah.

Dave: Yeah, no, I was just going to say ... just repeating what you said. That's the really vital thing is having your data in a sense that it all matches in with each other. So it's reference points. If you can grab as many reference points of an individual person as you can, then that's where you can start drawing conclusions. And that's where the machine learning, whereas it would take a human years to look at even an individual's different elements of testing that's done with them and the other questionnaire data that you might have, the intake forms, all of that kind of information. What machine learning can do is we can point at it and go, okay, based on knowledge of what other people have matched with, we can be much quicker at trying to understand what's going on with that person. And rather than yeah, taking an individual to look at every single element, we can just be much quicker at it. And that's what's really exciting about machine learning. It's really, I mean, it's expanding on what NES is already been doing. If you look at machine learning in a different way, artificial intelligence, the works that you and Peter did for 30-odd years of taking that and embedding it into a tool that allows people to understand very quickly what's going on. It's taking that same technique that Peter and you did and applying it to machine learning so that we can just accelerate. I mean, that's really what it's all about. We're continuing our research but it's looking at it and go how can we go faster, how can we get better results, how can we know more about your clients. And that's what's for me, the really exciting part is again, that exponential curve of knowledge of what's going on with an individual. Which of course, for a practitioner is the gold dust side of what can I understand about my client quicker and how can I get results with them quicker, which is

what people have always loved about NES in the first place. But we just want to make it better and better.

Harry: Yeah, well, it's the pattern recognition thing.

Dave: Yeah.

Harry: I mean, when you've been a practitioner seeing ... once you've seen 10,000 clients or upwards, you have so much experience. You end up being able to pattern recognition. Well, that's great, but that might take you 10 years, it might take you 20 years to sort of get that type of knowledge. Or you want some system, you want to use technology to help identify the patterns for you and you can just see them on the screen. Because the more important part of machine learning and sort of the computer end can't do is the soft skills, is all of the emotive. And so then you can basically concentrate more on coaching ... well, on listening, on coaching, steering your clients to do what's necessary all the actual therapy and of getting them well rather than sort of busting your brain of trying to recognize patterns. And you can't recognize a pattern that you don't have the knowledge of. It's just impossible but computers are able to.

Dave: Yeah, exactly. I mean, going back to the same thing about NES is that yeah, as a practitioner, you might not be able to recognize instantly what's going on with that client. Likewise, the client tends to be very poor at recognizing what's going on with themselves as well. So again, kind of taking that NES theory to the next level and pushing the boundaries is really the client can understand more about themselves based on the patterns we're picking up from all the ways we're looking at them. And thus the practitioner will ... it creates a great bond between the two and the results of resolving their health issues, just, yeah, will increase.

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Harry: Cool. Yeah, maybe we should talk a little bit about the different forms of sort of data analysis that the body field can collect. Well, you know about as much as me on voice so I'll ask you about voice, when-

Dave: Yeah, absolutely. So I guess, I mean, if we just kind of just start with the high level. So obviously, there's lots of different elements we can look at and we're looking, again, exactly of how you're saying, patterns within different elements. So voice is an area that we want to look at. There has been security tools that are starting to be created that actually look at voice patterns. They can see individual elements within people's voices, certain frequencies, timbers, things like that that occur in your voice that are unique to you. It's a unique pattern to you. And therefore, again, for us, that is another point of data, another data reference point that we can identify and go, okay, let's take that voice data, let's compare it with other data we have on you, are there any correlations? And then we put it to the machine learning tools where they can start doing that analysis and going okay, I'm seeing regular patterns of where this occurs, these frequencies, these timbers occur in voice patterns as well. So again, that's just

one element. I know Harry's also been looking at GDV, ECG as well. Again, reference points of-

Harry:

00:15:30

Yeah. Well, maybe we should say what some of these things are. Well, GDV is really interesting. It stands for Gas Discharge, I can't remember what the V is. Velocity, isn't it? Gas Discharge Velocity. But basically, if you look at your finger tips and you stimulate a finger electrically as just this micro-second electrical pulse and you have a camera nearby. And this is all in a dark place. Then basically, there's a little aura that emits from each fingertip. And depending on where photons emit around your fingertip basically can correlate to all of your different health organism systems in the body. And it's pretty neat, actually. It's pretty accurate, it's pretty repeatable and it's quite exciting. Obviously, it's based on the original sort of Kirlian photography and it was taken on by a naturopath called Peter Mandelson in Germany. And then after that, this Russian. He sort of really made it more commercial over the last 20 years. And then you'll see now we're going to take a step further with machine learning and now we're going to get all sorts of other data out of it that isn't there presently. So that's pretty exciting. Yeah, then what else have we go. Well, it's the HRV ECG. HRV is slightly standard. Everyone would have heard of the heart mass looking at stress response. HRV conveys, it's basically a measurement where you're looking at the activity of the parasympathetic and sympathetic. It looks like there is data also within on the meridian system which we're looking into. But if you look at the underlying ECG pattern itself, that just gets really ... Well, it just gets really fascinating because if we go back thousands of years, well, particularly have to go back. But the Chinese do pulse diagnoses where they put three fingers on here and then there's 27 different pulses that they identify. Now, a pulse, ultimately is basically ... well, it's basically a function of two things. It might sound a bit complicated but basically, there's a wave. There's a pressure wave that's coming out from the heart and then you also get a back wave from the pressure of all your different organs and arteries. Because if you have something going this way and it hits something, it bounces back a little bit too. And that basically gives you these 27 different pulse strains that the Chinese identified. So it hasn't ever been done but obviously, we're pretty convinced that in the ECG, in that ECG data we will be able to see maybe not all of those 27 patterns but we're basically going to be able to identify whatever else. And we absolutely will if we combine that with a more conventional sort of infrared ECG on a finger because that also includes the back wave. The ECG straight from the heart would only be the front wave. But to be honest, until we collect the data and see what on earth it all says, we won't know what it can tell us. But we do know it's going to tell us some pretty interesting things. So that's quite exciting too.

Dave:

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Really exciting. I think the other thing to really highlight as well, because I know people have concerns about it and we often use the word collect data. And really all that is finding more information about the individual. Collecting does definitely not mean distributing anyway. It's a way of gathering data to understand more about the individual. It's not about sharing that data with

other people. It's in a completely enclosed secure system in the same way that if you're buying habits match another individual-

Harry: Well, it's a strip. I mean, it's strips of the person too.

Dave: Absolutely yeah.

Harry: It's like within our research department basically when we're looking at that data, our researcher doesn't know whose ECG is what.

Dave: No.

Harry: So it's all totally encrypted and hidden.

Dave: Yeah, and we follow all the protocols that are designed by law to do that. But in the example I was going to give that often when you go to Amazon, you'll see recommended products. And those recommended products might be because another buyer has bought similar things to you. You know nothing, who that buyer is, where they love, anything like that. It's just within the system, it's identified a pattern. It's seen your pattern is similar and therefore giving you recommendations. And I just wanted to highlight the fact that it's not collecting, and we know everything about you and we're going tell everyone. It's nothing to do with that. It's completely enclosed, and it's really down to the individuals' benefit. This person in a same way a doctor will, a doctor will see people over a period of time and-

Harry: Well, it's basically participating in research.

Dave: Yeah, absolutely, yeah.

Harry: I mean, that's what it is. I mean, being involved in the NES world is basically an open-ended unending sort of … well, our mission is pioneering the field bioenergetics or another way we say is to decode the Human Body-Field to get to the root cause and restore people's energy for life. But yeah, we'll see. We can't do that without knowledge so that's sort of the game.

Dave: Absolutely, yeah.

Harry: It's part of the game.

Dave: It is the security of it. And I think the other element is obviously we've got the way with ECG, GDV, and voice as well. And there's other elements we can use with artificial intelligence. So we do envisage a time where when a client expresses interest in working with you, we can automate that process of potentially having that initial conversation to say, "Hey, how can we help? What are the key areas you want to deal with?" Obviously, most practitioners are using intake forms as well so we can look at pre-filling some of that information

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for you. So when you actually have your clients out in front of you and you're working with them, again, you've just got a bit of a heads up, a bit more information, less admin that you have to do. So you can, as Harry said, concentrate on working with that clients, making a connection with them, just because you've got a lot more information at your fingertips to be able to get a quicker understanding of what's going on, what the health concerns are, and where they want to be going. Which again, you know, as humans, certainly British, are very good at expressing their emotions and what's going on. So to think a bit deeper early on just to get an understanding, it just gives a huge advantage to the client and the practitioner because as I say, they just know more about what's going on.

Harry: Well, also, I mean, it's sort of a slightly minor point. But it also just makes it a lot more efficient, the process of … I mean, instead of emailing over some client questionnaire that's done in by pen and they scan it back. And then you put it in your files and then you have to dig out that file for that patient the next time and all that. Instead of all of that, the whole thing is just automated because the client just receives a ... oh, when you sign up the client after they get their scan, then they just fill out the questionnaire online. It will only take them 10 minutes or so. But then that's always instantly at your fingertips whenever you're then scanning them in the future. So you can just pull up ... well, you can pull up that, you can see their progress and all of that. And obviously, if you want to share it, your client ... they can as well instead of digging around files around your computer and all that bananas.

Dave: Yeah. And going back to machine learning side again, if the machine learning sees patterns in their intake form, so another client that you saw who entered similar information and has already delved a bit deeper via the other testing techniques. Again, we can start preempting some of that information and saying hey, you might want to consider looking at this and this because these are the items that have come up before with other clients that match some of the criteria. So again, it's just huge amounts of information to really give you the best experience you can with NES really, if they're fighting time.

Harry: Yeah, cool. Cool, cool, cool. All right. Well, I think that's probably it. Do you have any parting words of wisdom, the Dave Court wisdom?

Dave: I mean, for me, it's just an incredibly exciting time. With the age of information and data, it's just going to ... it will revolutionize every part of our life.

Harry: And me and Dave, we're going on a road trip, aren't we?

Dave: We are. A California road trip, Singularity University, yeah. So again, we're meeting up with amazing people who are doing similar things in this field. And it's just an incredibly exciting time and it's just a case of us ... Harry and I are the same, we're just trying to learn as much as what's going on and implement as much as quickly as possible because we just see the enormous benefits this is going to bring. I know it sounds a bit grandeur but you know, the world as a

whole. This will change health for everyone and it's just an incredibly exciting time. And I feel very fortunate to be part of it.

Harry: Cool, cool.

Dave: Good stuff.

Harry: NES is very fortunate to have Dave. All right. On that note, I think that will do. Cool.

Dave: Right. Thank you, Harry.

Harry: Thank you very much.

Wendy : Please keep in mind that this podcast is not intended to diagnose or treat any disease or health condition, and is not a substitute for professional medical advice. Please seek a medical practitioner before engaging in anything that we suggest today on the show.