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Narendra, thanks for being available for this interview. You originally came from Rajasthan in India, and moved here to Europe, Austria. Maybe we can start the interview by introducing yourself.

Yeah, sure it's my pleasure to talk to you. It's always my pleasure. Hello, everyone. My name is Narendra. And I'm 27 years old. I came from India. I moved to Austria in 2016, to do my Master's here, in electrical energy and mobility system, which is a combination of mechanical electrical and electronics. Somehow based on electric vehicles electric cars. So I was really fascinating about electric vehicles, because I think electric vehicles are the future. So I moved to Austria to do this masters. I am now about to finish my masters, I am writing my Master Thesis, and looking for a full time job, at the moment.



Javad Zarbakhsh: Narendra, a part of your CV is very amazing. You have very interdisciplinary knowledge in different areas, starting from Finite element going to LSDyna, crash simulations and going further the direction of the 3D printing. These are the information that you have, and makes your your CV quite amazing from the multidisciplinary point of view. I'm sure lots of companies are interested in having a person with several different expertise. So, can you just say a little bit more about the expertise, and how did you get them?

Narendra Singh: When I came to Austria I didn't know about 3d printing. It was just something very wonderful tool for me that I wanted to learn. So, first you told me to learn Inventor in a nice way, because in India I just

got an overview. So, I learnt inventor, and I start designing something in 3d designing 3d modeling in Inventor, and then later on you taught me how to 3d print the stuffs, how to export these files from inventor to 3d printing software, and later on, we did 3d printing. 3D printing is one of my expertise, because we worked together for almost one year and parallelly I started learning FEM (Finite Element Modeling), because I wanted to learn ANSYS, which was also available at university, although it was not part of my curriculum, but I used to come to your lectures if you remember.

Javad Zarbakhsh: Yea, Of course I remember, you were attending the lectures. You were not registered, any way.

Narendra Singh: But you allowed me, and that is how I started learning ANSYS, so I used to practice over the night about this inventor and ANSYS Software, because they were available in the labs. So I used to stay very close to university, and I used to practice over there in the night. So that's how I was learning by watching YouTube videos and by your guidance. I started learning ANSYS, and through ANSYS, I was you know gained a good knowledge in finite element method FEM simulations. So I did some simulations in ANSYS for the drop Simulation crash simulation structural simulation thermal simulations all I learnt in your guidance, and by YouTube lectures as well. Because there are lots of videos available and then I use the same things in Hispano-Suiza. There, I 3D print a few parts for them and I also try to do some structural simulation for them for their car. And later on, when I move to Magna, I even learn more because they are using LS-Dyna, which is one of the best software for crash simulation. So I did that crash simulation of the entire car the structure body, with structure of the car and I learn LS Dyna and a very deep knowledge of FEM simulation and parallelly, I also learnt MATLAB. so these are, I would say design 3d design in Inventor. I also know Catia and MATLAB and simulation in ANSYS and LS-Dyna, and 3d printing. So these are a very diverse field which should be you know ideal for a mechanical engineering you should know design simulation and 3d printing so from scratch to end product. I know almost everything. You guided me well, like, now you should learn this and now that, so it was a step by step process as I said before if you have a nice mentor, you can go in a right direction and you can learn a lot. So, that's how I can say.

Javad Zarbakhsh: Yes, I can confirm that from the industrial point of view, it's much easier for a company to employ you, because you can replace almost three different engineers. So, actually you will be kind of added value, in term of human resources to a company, because then they don't need to employ three different people for 3d printing, for doing the finite element. and doing the design.

Narendra Singh: Yes, that would be an Ideal job, I would say.

We had some discussions in the past about the differences of the India and the situation in Europe. Could you just shortly describe how is the situation, if you want to describe the differences between the Europe and india in general?



okay. So, in India education is very expensive i would say, and good universities and colleges are limited. They are government and there are few private engineering colleges or medical colleges. They are very limited so the private ones are very expensive and the government's are very competitive. Because the population of India is, you know, 1.3 billion. So it's like a very challenging stuff over there. And as there are lots of engineers in the market, so the salary the wages are very low. Even after you graduating from a good engineering college or university, people have to struggle with their salary. It's not up to mark and the standards are very poor. So this is one thing.

On the other hand in Austria, the population is very low the education quality and the standards are really high and you are getting good wages and that's probably one of the big reason why students are coming to Europe, to explore their career, and there are less challenging tasks, and more opportunities.

Javad Zarbakhsh: When we compare the typical Austrian cities to India, I mean generally talking about Europe, The population of cities are very low From the Indian perspective, you would not even consider the European cities as a city. What is your impression? Yeah that's true. I remember talking to you, once you arrived here, and the City like Villach, the city that we first time met, is very small. So what is your impression about the European cities?

I came from a big city in India that is Jaipur, it's among the top ten cities of India so I was also thinking like, okay, Europe is really great, like big cities and the European cities are never sleeping, I was in St. Petersburg Russia that was my first you know country outside India. I visited Russia for doing an internship in AIESEC, during my bachelor's. And Russia is really great, the St. Petersburg and the city was never sleeping and it was

white nights, and whole the times it was day, because I was there in summer. So I was thinking. I am in Russia, and it is that great, then maybe other countries like Austria Germany they are even greater, because they are exactly Europe you know the heart of Europe. So my expectations was totally different.

But when I came here, I was totally surprised because I felt like I am in a small town. Although Villach is the sixth biggest city in Austria, but still I felt like as a town. Everything closes around seven o'clock in the evening and you only see cars and no people on the street in winter. And it was bit depressing for me. So I was a bit disappointed in the beginning so what I imagine it was totally different from that It was like a small town for me.

Javad Zarbakhsh: Now, we are located in Vienna. and of course Vienna is much larger than Villach.

Yeah Of course.

You have experience of living in very small cities in Austria, like Villach with 70,000 population, and also moving to Vienna and Graz. What is your impression when you compare different cities?



Narendra Singh: So, when I go to Vienna or now I am currently located in Graz so when I.. You know I'm Graz in Vienna I feel like home because I can see more people on street and it's more happening everywhere people are around and even the shops are open on Sundays there are a few shops open on Sundays. And actually people are more open because they are used to see this kind of international people. But in Villach, in small cities like Villach, they are not used to see international people. So, even their behavior is a little bit awkward but like you know in Graz and Vienna they are used to see Indians or and Chinese or Pakistani people, they are very used to it. So I don't feel any kind of difference in their behavior, so this is another thing. So I just, say, I feel like home and I feel very happening and positive inside me when I go to big cities.

Javad Zarbakhsh: Comparing the large cities and small cities you mention that the cultural behavior of the people are different. Do you also feel that there is also corporate cultural differences in terms of employing

foreign students in small cities in compared to large cities or did you have the same chances everywhere?

Narendra Singh: Yes of course there is a difference. Because in small cities, people are not very used to speak English. They are just limited to their local language that is German. So it's more challenging to find a job in in small cities. But in big cities like Vienna or Graz, or Berlin or Munich, there are lots of international companies they are located there and they it's even easier to get a job over there because there are so many English-speaking people audience is there. So I think it's a huge difference

Javad Zarbakhsh: Let's talk the projects, we did together in the past, What was your impression, and how was your starting point that we knew each other, Maybe a little bit of introduction, how we met each other. It was of course quite interesting to meet you.

Yeah, Sure. I want to listen to the story, or maybe you just tell the story from your perspective.

Narendra Singh: I just came from India and I didn't have any experience. I was very depressed in that time as I said before and I was just looking for someone who can you know help me with learning and help me to get some experience so I do remember we met in a Christmas party which was around 17th or now it's exactly three years and you know few days ten days let's say so we met so you just you are very welcoming. You welcomed me and I feel very positive when I met you first time and you said yes we can do lots of project. Your CV is exactly what we are looking for. You are interested in 3d printing, designing software, like inventor, MATLAB and we are doing exactly the same. So, first time I feel okay I get something positive, and that's how we started. Then I was involved in lots of project because in the beginning, I wanted to learn. So I get an overview of all the projects, and I was helping you with all the projects together. So it's more management and also at the same time I was learning inventor and the 3D Printing and Matlab. So it's in both way I get benefited, in terms of management point to a few, as well as in terms of technical point of view. And later on, in your guidance, I got the internship in Hispano-Suiza, which is just a result of your actions actually. Because if I never had experience with you, probably I'll never get a chance to work in Hispano-Suiza. And from Hispano-Suiza, I got a chance to work with Magna for my master's thesis. So all the dots are connected somehow. And I'm really thankful to you for all your guidance throughout my engineering. Still we are in contact and you are guiding me a lot. So I'm really thankful. You are one of the biggest booster here in Austria for me.

Javad Zarbakhsh: Yeah, I should also thank you, because you are also a very special node / connection to many other students, and other friends that we have and of course I consider you as a friend now Yeah of course, we had lots of fun and I remember the Diwali that you invited us and it was it was great

Narendra Singh: I mean we had some times we danced we enjoy alot, like very friendly

Interview Part 2

Javad Zarbakhsh:

How do you see yourself in five years? What is your future plan?

Narendra Singh:

I want to get a nice job in a very reputed company, one of the best automotive companies. This is my dream, to work as an engineer, as a CAE engineer, for passive safety, or in terms of 3D printing additive manufacturing engineer. This is my dream, and in parallel maybe I would go for some startup as well, maybe in India or here. So I want to expand myself in both the directions, I want to start a small startup and as well as I want to be a good engineer in a nice well reputed company.

Javad Zarbakhsh:

Of course, having a start-up has several advantages. Let's say especially as a foreigner in Europe, you will have a little bit more freedom as a startup.

Narendra Singh:

We discussed about it, you guided me well about the startup things, I think we already have a good conversation about it.

Javad Zarbakhsh:

It is actually true that starting a start-up in Austria is relatively simple I mean assuming you don't have any work permit problem and you don't have visa problem I mean considering that this problem has been already solved then starting a company brings you actually a lot of advantages in compare to ...

Narendra Singh:

Yeah that's true, that's true.

Javad Zarbakhsh:

Being in Europe, many people still think that okay they are in Europe and they are still living in a small city and so on. What is your impression? I mean moving around in Europe compared to moving around in different countries in Asia.

Narendra Singh:

I traveled so many countries in Europe, because there is a big freedom of traveling around and even you can take this advantage for applying jobs. Job is a little bit challenging but for getting internship and finding internship across the Europe is very easy even you know when you are a student here you are promoted to go outside and find an internship within the EU (European Union), so you will get Erasmus scholarship as well as you are it's because you have the work permit here which is valid in all the EU countries. So it's very easy to find internship over there. So this is a big plus. Second, you don't need visa so you can travel free without any boundary so I visited Italy Czech Republic Hungary and Germany, Slovenia, Serbia, where we went together for the photonic conference.

Javad Zarbakhsh:

Yea, I remember that. This was actually another question I wanted to ask you. Because we arranged this travel for you to Serbia, Belgrade. Could you tell this story from the beginning? Because I think this was also funding that we arranged for you. It was not totally planned much earlier, but It just happened. So we had some

funding so could you just tell this story from your perspective.

Narendra Singh:

We were working on the optical 3d printing together, and because throughout this work experience I got to know about this optics and optical phenomena a lot and it was also very interesting for me and due to this reason You forwarded my name to this photonic conference, and I was invited there as a guest lecturer, to show my work. And , I went to Serbia and it was a two days big conference with very welcoming people and I got a scholarship of 1,500 euros I get from there I don't remember exactly but it was something 1000 or support in my studies and to cover up the traveling cost I would say.

Javad Zarbakhsh:

and I think it was a great experience, and quiet nice..

Narendra Singh:

Yeah, it was a great learning. And you were there, and we make lots of contacts over there and people were so motivated to organize 3d printing workshops over there so it was very enjoyable time. And I got my certificate from that. It was really also very helpful in my career I would say. Yeah, exactly.

Javad Zarbakhsh:

This kind of certification which was ... Comparing your situation with the rest of the students from Asia coming to Europe, your CV is at the moment a unique CV I would say if I take a look at that because of the work you've done or the past years was different than the others. You have right now, kind of unique situation. Do you think that the people will get different chances ? Or what is the effect of having a unique CV in your career?

Narendra Singh:

I think I'm lucky I would say, because I met you very early in 2016, right after two months after coming to Austria and then you guided me well. For one year, we work together. And later on, I moved to Hispano-Suiza which is also very reputed I would say. They're manufacturing cars which cost like 2.2 million Euros. And later on I got my master's thesis in Magna Steyr which is the biggest contract based car manufacturer in the world. They are manufacturing Jaguar electric Jaguar E, and BMW series 5, Mercedes-Benz G-class. Like all the very expensive cars, and I worked there as a passive safety department for the crash prevention. So, it was very great experience and all these experience, all together makes my CV a little bit unique and they all are connected somehow and Because of my work experience, after coming to Europe is almost now two years, and because that I'm getting lots of calls, interview calls. Everywhere I am getting a positive response so far, I would say.

Javad Zarbakhsh:

Of course, this is actually the key to the success and right now of course I wish you all the best with this carrier but this is actually something that is anyway coming to you. So let's continue with the next question. Talking to the people outside of Europe, sometimes the people think that specific manufacturing industries are related to Germany, while Austria is sometimes is not really well seen from outside. What new information you received here after coming to Austria to say that hey these information, I didn't know that Austria is doing this

and that.

Narendra Singh:

You know before I came to Austria, I knew Austria from my childhood. That's another story. But before I came to Austria, when people asked me in India, Where are you going? Then I said Austria. And they all were assuming that I am going to Australia. Because people really don't know about Austria. This is really funny. They think, they know Vienna. But they don't know Austria. This is a fact. Or sometimes people think it's a part of Germany. This is another funny stuff, I would say. But Austria is like a really really very beautiful and great country. We have AVL which is the world's biggest private automotive consultancy in the world. we have Magna Steyr which is also the biggest contract based car manufacturer in the world and we have Redbull and so many other big companies are here. BMWs biggest engine diesel engine main plant is also located in Austria. So Austria is somehow very much connected with Germany, so we cannot really differentiate between Austria and Germany. I mean they are very much linked and working together in all point of views. There is no visa requirements as Austria and Germany, they both are part of EU. So it's like one country, when it comes to business and technology. They are sharing the same technology and doing the business in a similar way. So, we should not even think Austria is somehow lesser than Germany. They are almost equal, but the living standards in Austria is pretty much high Vienna is the most livable city in the world. So it's more cleaner and more nicer. and Graz is the fifth happiest city in Europe. So there is no city before that. From Germany, there is only Munich which is on 4th. They are connected and very very nice place to live, I would say. It's even better than Germany in my point of view.

Javad Zarbakhsh:

You have a certain experience that you collected over the last years. What is your advice to the people who have not yet come to Europe but they want to come to Europe, and they are hesitating to move to Europe. To which country they should go. So, what is your advice?

Narendra Singh:

So the first thing is when you are not able to find a job or like internship in the beginning as a student, then probably you should find a good professor and you just say, hey I want to learn something whether you are paying me or not, it doesn't really matter. I just want to learn you have to show this passion and enthusiasm to learning. And then in the beginning, you will not get anything. But you will learn something when a European experience add in your CV, it makes a great impact. So, whether it's paid or not it doesn't really matter. So this is one advice. Second advice would be to learn the local language before coming to Europe. So before coming to Germany and Austria, I think you should learn German in India or in any country where you come from so it makes life easier. It's easier to interact in supermarket, or even in university with the other people and even in finding internships and jobs. The language is very important. That's what I want to mention, because even although my CV is really good, and I am getting lots of calls, But still, there is one big reason I couldn't find any job here. It is that my language. I really don't know German that much level. My German is not so good. So this is one reason, one big barrier to get a job. And another important thing is like when you find a person who already you know going through the same situation like you came from Iran, here to study in Austria and then you establish yourself really well. So, when I came in contact with you I asked you lots of questions. Maybe I irritated you with my questions but at the end, it was that you guided me well and this is very important thing. If you find a person as a mentor. So in case you guided me well because you are you are already aware of all these situations. Everything is in your mind. Like how and how should you do this and

what should you do next, and what should be your next steps. So you guided me well and that's one important thing. So if you have someone as a mentor, you also remember Sarath, he also guided me. Actually he's the one, who introduced me to you. Yea, I remember. Now he is also in a good situation, he worked in Lam, and now he moved to Netherlands. Because you guided him, and he introduced me to you. Because he thought, that you can help me as well. And now, I think it's worth, that I'm in a good situation and because of your guidance and your directions, or let's say your mentorship.

Javad Zarbakhsh:

Of course, my pleasure. Saying the name of Sarath, he used to be very important person in our previous projects and he has a huge success and yeah I mean this is this is absolutely it was was one of the largest success stories that we had we probably will going to have another interview with him. He is right now back in India for a short time but he will be back soon. So let's say that we can arrange another interview with him as well. Narendra, thank you very much again for taking the time.

Narendra Singh:

You're welcome.

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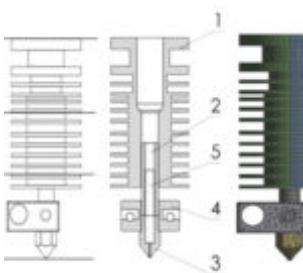
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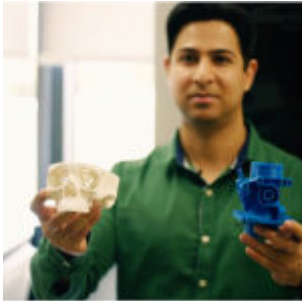
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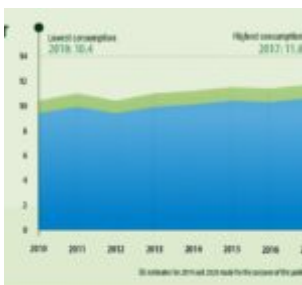
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