SDS PODCAST
EPISODE 12
WITH
MEGAN PUTNEY

Show Notes: http://www.superdatascience.com/12
Kirill: This is episode number 12, with up and rising Tableau expert Megan Putney.

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Welcome to the SuperDataScience podcast. My name is Kirill Eremenko, data science coach and lifestyle entrepreneur. And each week, we bring you inspiring people and ideas to help you build your successful career in data science. Thanks for being here today and now let’s make the complex simple.

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Hello and welcome to the SuperDataScience podcast. I'm very excited to have you on the show. And as you may know, I have quite a few analytics courses out there. They range on different topics, on R, Python, Tableau, Machine Learning, and so on. In fact, I have a whole platform full of all of these things, SuperDataScience.

Well today, our guest is Megan Putney, who is one of my students on the Tableau course. And Megan is a very, very interesting person. She just started learning Tableau only 3 months ago, and as you will see from this podcast, she is already rocking it in the world of analytics. I was very surprised. I didn't know that Megan has only been taking Tableau for 3 months, because when we were talking through the podcast, I kind of got the impression that through the things she is doing, she must have been already using Tableau for a year, or a year and a half. But when she said it's only 3 months, you will even hear me being quite shocked on the episode itself. So you know, it just stands to show that when you want to learn something you can really pick it up very quickly online. So that's going to be one of
our focuses for this episode, learning online, and it will really benefit you if you are in that same boat, that you're trying to learn a skill online, whether it is Tableau or it isn't, maybe you're trying to learn other skills. But you will see the process that Megan went through from not knowing a tool which was introduced at her workplace to actually mastering it to a very good level.

And also, specifically we'll talk about Tableau in quite a lot of detail. We'll talk about how Megan uses Tableau for two types of work. First of all, Megan creates reports on a weekly basis with Tableau and sends those out to the team. And Megan works for a retail organisation where they produce different types of beverages. So the data sets that she's working with are quite large, and their reports go out to quite a few people. So that's an interesting discussion around how she uses Tableau to facilitate the work and help people get insights into data.

And also, Megan uses Tableau for another type of analytics, which is ad hoc analytics. So something that doesn't happen on a regular basis, but when they have like a promotion, or sales, or their sales representatives go to different stores around the place, and then they call up Megan to find out some information and she can quickly that out from Tableau. So that's also a very valuable type of work that she's doing, and it's going to be very interesting to see how she goes about it.

And another thing that you should know about Megan is that she's one of the founding members of the Tableau user group for Northwest Arkansas. So if you're somewhere in that region, then at the end of the podcast we'll even share the links, and you'll be able to catch up with Megan's group.
But even if you're not, this is still going to be a great experience for you to see how being part of such a community of either Tableau users or analysts or data scientists interested in other tools can be very beneficial and can help support your learning.

And without further ado, I introduce you Megan Putney, an up and rising Tableau expert.

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Hi everybody, welcome to this episode of the SuperDataScience podcast. Today I have with me Megan Putney, who is one of the founding members of the Tableau user group in Northwest Arkansas, United States. Hi Megan, how are you today?

Megan: I'm good, thanks so much for having me on the show, I really appreciate it, I'm really excited.

Kirill: Thank you. Thank you so much. Because the way we met was very random and interesting at the same time. Megan reached out to me to find out some materials for her group, and I was very fascinated that this group exists, and that Megan is actually running it. Because rarely you see people doing things like this so selflessly and to help out the community. So Megan, can you tell us a little bit more about how you got into running this Tableau user group in your region?

Megan: Sure. So one of my old colleagues reached out to me and said hey, I know you love Tableau and you're very good at creating scorecards and things, and you have such a passion for it, would you be interested in coming and joining this founding group of Tableau users in Northwest Arkansas?
Arkansas? And so I went to the group and we discussed what we were doing to cover in our first meeting, and we had our first meeting last week, expected about 10 people to show up, and we got about 40. Everyone thought they were on their own island using Tableau, but in fact there's a lot of people here in Northwest Arkansas using it, and it's so great to have people to bounce ideas off of and really you get the most use out of the software.

Kirill: That's really cool. So how did you get all those people in one room? Did you put out an ad or something like that?

Megan: Yeah, so we have a Facebook page, and then also we have just a user group on the Tableau site, and we did reach out to one of the -- I think it's Stout Executive Search happened to send out an email to their listserv, so that got a lot of word out. And we got a really good feedback response. So it was good.

Kirill: Wow, that must be pretty exciting. I know you've only had one catch up so far. But what is your vision for this group? Are you going to be running exercises, or are you just going to be exchanging experiences? What do you plan on doing there?

Megan: We're hoping to show a few exercises, and that's why I originally reached out to you, as we were hoping to maybe show a small clip of one of the trainings or just to show an example of something you can use with Tableau. So for example, we already showed one of the things with mapping custom regions. So with Tableau 10, you're able to create a custom map of your sales region and understand what's happening with sales there. So we showed an example of how you do that, walked them through it, and then how we
Kirill: Ok, that's really cool. And I'm assuming from that that you're not just learning Tableau as a fun thing to do on the side. I'm assuming that you use it at work. Is that correct?

Megan: Yes. It's definitely a critical part of what I do. So I create a weekly scorecard where I pull down all the data from Walmart at a store item week level, and then I'm able to quickly answer ad hoc requests from anybody throughout the week with the latest data. So it's been really, really nice to have that resource and to be able to quickly answer business questions.

Kirill: Oh, that's really cool. And just to rewind a little bit, can you tell our listeners please, where do you work and what is your role?

Megan: I work for Mike's Hard Lemonade, and I'm a Category Development Manager.

Kirill: So what does a Category Development Manager entail?

Megan: Category, when you're speaking Category, you're talking the entire section of the store. I'm in Mike's Hard Lemonade, which is a flavoured malt beverage, and that's part of beer. So when we're talking Category, you're talking about growing the entire beer section of the store. You know that if you grow the entire Category, you're not just stealing share from one of your competitors, but you're actually letting everyone get a bigger slice of the pie.

Kirill: What does data allow you to do? So just so our users understand a little bit better what's going on, what is a single row in your data set?
Megan: A single row in my data set is basically what scans through at the register at the store. So you could understand velocity being dollars per store per week on certain items. So you'd see each item, what it sold, by week and/or by store. So any way you want to cut that data, or sum it up, or go into that detail.

Kirill: Wow, that sounds like a perfect data set for Tableau! Super granular, and then you use Tableau obviously to aggregate it to certain levels of detail that you need, right?

Megan: Yup.

Kirill: Ok. That's very interesting. Let's talk a little bit about your background. So Tableau was introduced at your organisation. Did you know Tableau before that happened? Or is that how you learned about Tableau?

Megan: I had heard of Tableau, and I got the free trial at one of my previous positions, but I never really got into it. But then at this role, there was actually someone else who was really, really interested in Tableau, and I was sort of a late adopter, and I wasn't really interested in it. Then I started using Tableau, and at first I was actually really frustrated with the software. And then I was like, I got to take an online course or something, because this is not working out! And so I took your course online, and it made it so much easier to understand, and I was able to quickly pick it up. Because I was getting really frustrated initially, but with the basic beginner course, I was able to understand and quickly build my scorecards.

Kirill: Oh wow, thank you. That's always great to hear feedback like that. And the things you learned in the course, you were able to apply them right away at your work?
Megan: Yeah, I was able to create an actualised database basically, to put all this data into the format I needed, and then put it into this scorecard. And I built up the scorecard using the different worksheets, and then building those into the dashboards, and then building dashboards into the story. And so then I have something I can review with my team each week and really understand at a granular level what's going on with the business. So we do an overview, and then I actually have -- you can dig into every state, every region, and then as low as store level data.

Kirill: And who do those reports go to?

Megan: I cover them with the team every week, and then they're able to dig in a little deeper, and then send it to the field, and we can get any issues resolved really quickly.

Kirill: Oh yeah, that's really interesting. I feel like we're going a bit backwards in this podcast! It's a bit unusual for me even that we first talked about your most recent hobby, and the Tableau user group, then about your experience and how you got into Tableau. So we're slowly working backwards. So I'm just going to skip right to the very beginning. Can you tell us about your background? Is your background in data science, or analytics, and how was the move to this area of work that you're doing now?

Megan: I'd say really I have more of a sales background more than anything. So I actually went to the University of Arkansas, got a degree in International Business with a major in marketing. So I've kind of been in sales/marketing throughout my whole career. So within university, I actually had two internships with Danone Yogurt, or as it's known around the world, Danone.
Kirill: Yeah.

Megan: In Australia. So I had a sales internship with them in Arkansas on the Walmart team, and then I had a category management internship with them in New York City focusing on the white space accounts, so those really small accounts that don't have a ton of IRI data. Within the US, there is IRI and Nielsen. So they're basically the two major data sources.

Kirill: So with Nielsen and IRI, just to understand, all the stores in the US, like the retail stores, they actually sell data to Nielsen and IRI, and then those companies sell them back to you so you can do analytics? Is that how it works?

Megan: Yup, and that's why the systems are usually really expensive. Because the data ends up getting marked up because the retailers are selling to IRI, and then IRI sells it back to you.

Kirill: I can see how it would be so expensive and they're in such a great position, they're just two companies in the whole of the US, or two major companies, that actually perform this. That's such a good model, where they're making money off data. That is awesome. I find that fantastic.

Megan: Yeah. Maybe it's not so awesome for suppliers!

Kirill: Yeah, totally. Please continue. So you had this experience with the white stores that are not part of the IRI, is that correct?

Megan: Yeah, they call them white space accounts, so basically they're just a bunch of those really small stores that are grouped together. They basically say here is all the rest of the stores. So they get the big stores, but then they have these accounts that aren't really big enough to be accounted
for, or they don't sell their data, because maybe they don't have a good data reporting system. So they kind of extrapolate out what it would be and give an estimate. So basically, with that, everyone's focusing on the big accounts. So you don't have a ton of time to understand what's going on in those smaller accounts. So basically, my job was to say, create a quick way to update the data from IRI so that with the click of a button, you refresh your data, you click what time period you're looking at. Then everything refreshes. It says, here's what going on in your stores. Sales are up, these are the segments that are up. These are the brands that are up or down. This is what's happening in the region. It's a category thing, or it's something that's happening in these stores specifically.

Kirill: Oh wow, fantastic. And just out of curiosity, are those dashboards public, or they are more confidential information within your company?

Megan: Yeah, those would be confidential information, yeah.

Kirill: And so do you just use Tableau Desktop, or do you use Tableau Server to deploy them?

Megan: I was using Tableau Desktop, and then I just recently upgraded to the Tableau Professional so that I could link into our back data for all of our depletions. Oh, when you talk depletions, it's basically -- with beer, it's a 3 tier system. So we sell to distributors, and then distributors sell to Walmart. So that's another layer of complexity. It's due to old laws that have never been changed in the US.

Kirill: Oh, ok. The distributors must be happy about it.
Megan: Yeah. So I have Tableau Professional now, and then I just enable everyone to use it through Tableau Reader.

Kirill: Oh, ok. So I see how that works. The question I had is, you came from a sales and marketing degree, where obviously you didn't study Tableau. And now you're applying it in your work. Would you say that Tableau is making your life easier? Or is it just adding a layer of complexity, so it's just like another tool that you have to deal with on a daily basis?

Megan: No, I think Tableau has made my life a lot easier. So usually, I would have to pull the data, do an ad hoc pull from Walmart's system itself, then you have to wait for it to run, and then you can get it back. And then you have to format it. But Tableau, I'm able to have all of that ready to go in an instant. So I'll get calls from all over the country, from different field sales people calling on Walmart saying hey, I'm in this store, are we supposed to have this product? What's the units per store per week on this? And I'm able to quickly filter out and say hey, this item has x dollars per store per week. It's an awesome item. We definitely need to have it in there.

Kirill: Ok, yeah, that's pretty cool. So you're becoming like this expert that's known not just in your store where you work directly, but across the whole region where people are starting to call you up. How does that feel?

Megan: Working for Walmart, you're always the biggest piece of the pie for your company. So you usually get calls from all over the country. So it's not too much of a change from other roles.

Kirill: Alright.
Megan: As long as the numbers are good, then you're good. Some are good phone calls!

Kirill: That's pretty cool. And let's talk more about Tableau. So when did you start learning Tableau? How long ago?

Megan: Probably about 3 months ago?

Kirill: 3 months ago? So very, very recent.

Megan: Yeah, yup.

Kirill: And you're already creating dashboards, you're already talking to stakeholders. That's very impressive. And tell us how was your journey? So you found out about this tool. You said you were a late adopter, but there was somebody that was already passionate about Tableau in your organisation. You obviously installed it. So before you found out about the online courses and you started using Tableau, what were your first impressions? How did that make you feel?

Megan: I knew that Tableau had the power to do a lot of things, but some of the ways that you use it aren't really similar to Excel or other things that you've used in Microsoft Office. So it's a bit of a learning curve there. So I knew what was possible, but it was really difficult getting to that. And also, there is a concern too. With Tableau, you have to make sure that you're aggregating the data in the right way, and you've set up your data in the background in the right way so that you're getting a good data output. Because if you don't have a good input, you're definitely not going to get a good output.

Kirill: Yeah, as they say, garbage in, garbage out, right? Yeah, totally. Ok, so you had a few challenges. What would you
say was like the most challenging thing for you at the very start when you're learning Tableau?

Megan: I mean honestly, I didn't struggle with it a ton at first, I just - - whenever I get frustrated with something, I don't spend a ton of time being frustrated with it, and I just instantly look for a solution.

Kirill: That's a great quality!

Megan: So I just like instantly took your courses.

Kirill: But just from your first impressions, first day. What was the most challenging thing?

Megan: I guess having to set up the whole Access database. So I actually have a set of five Access databases that I have to do just because of IL size limits. So basically it's setting up the data, was probably the most difficult part of getting it into Tableau, because it does have to be in a certain order, like I mentioned.

Kirill: No, that's good. That aligns very well with the notion that data scientists spend about 70% of their time setting up the data and only the rest, 30%, performing the analytics and conveying the results. So that's a good confirmation of that rule. And from there, then you took an online course. How long did it take you to go through the course? As far as I remember, it's a 7-hour course. How long did you take, how many weeks, to get through the course?

Megan: I think I did it within a week. I just basically broke it down to about 2 hours a day and I just did it either at the end of the day, or just whenever you have a little bit of time to be able to take it. So you can do 2 hours a day and just knock it out. I knew it was going to be worth it because I was
spending so much time on ad hoc requests, so every ad hoc request that came in, might take you 30 minutes to an hour. So I knew that if I could get this up and running, it would save me a ton of time. So I really prioritised it and tried to get it done as quickly as I could.

Kirill: And did you do it during working hours or during your free time at home?

Megan: It was a mix. I probably did the half during work and then half at home.

Kirill: Yeah. Okay. That’s good. That shows determination that you found time in your free time to work on this course. And as you were taking the course 2 hours per day at a time, did you see results? Did you go back to work and were you able to apply some knowledge that you learned right away, or did you need a few weeks after that to consolidate everything you learned?

Megan: No, I didn’t. I applied it right away. I will say, one of the things I remember distinctly was the revelation of how to zoom in and move around the map. I was like, "Wow! I didn’t even realise!" That was really frustrating, just moving around the map. And then just the fact that the little arrow—you can open up the box and then choose whether to zoom, or drag, or anything like that.

Kirill: OK, yeah, that’s a really cool thing. I think they changed it a little bit in Tableau 10. Like, it’s a different combination of keys now. It’s a bit different. But still it’s a very powerful thing to have. And it might be obvious sometimes, but sometimes you might be like "Oh, wow! I didn’t know this existed." I still come across things like that in software. All right, so you were able to slowly apply that at work. And did
you notice that towards the end of the course—was it easy to keep those skills in mind and remember those skills that you started at the beginning of the course? These are the questions I’m asking especially because I think a lot of our listeners who are learning online will really benefit and see the value that you’re actually a person who was able to apply these skills in a real world scenario. So the question is, at the start of the course you learned some things, and then towards the end of the course, there’s so much information going at you. Did you start forgetting the things at the start of the course? Or how did you go about concreting that knowledge in and keeping it fresh?

Megan: I think it up pretty well and then I was using Tableau so often too. I was going back to the same things that I had learned in the course over and over again, day after day. So, I think just the repetition of doing it, having kind of a muscle memory there really helped. And I think it does build on each other. Sometimes, and I know definitely for Tableau 10 – there was a lot of changes in Tableau 10. One of them was creating the custom geographies. I’ve actually used the lessons as sort of a resource and I’d be like "Oh, I remember I learned that in this lesson." And I’d go through the guide and I’ll look for it and I’ll just watch the video again just to refresh my memory.

Kirill: What you are saying is it’s beneficial to have continuous access to this course; that even though you finished it, you can always use it as a reference or a guide when you feel lost in some certain topic?

Megan: Yeah, it’s been really nice because there’ll be some times where I know that it’s something you discussed in the course and I’ll be like, "I know I learned it, but I can’t
remember right now." So it’s nice to be able to go back and look at it again.

Kirill: Okay. Yeah, totally. So that’s how you’ve learned Tableau so far. And do you feel that your knowledge in Tableau right now is completely sufficient, that you’re able to tackle any task at work?

Megan: I would say there’s always something to learn, so I definitely have an advanced knowledge of Tableau, I feel, but there’s some things that have been really nice – to be able to reach out to the Tableau user group when you get frustrated with something. So one of them that Tableau is notoriously bad for is you can’t really group time periods very well. So, for example, you can create groups or things like that but in sales, you generally want to see what your trend is doing, so you want to see a 52-week view all right next to each other. So 52, 26, 13, 4 and last week. Generally, the time periods you want to see so you can see if your trends are accelerating or decelerating. And Tableau has a really hard time doing that. So I’ve been able to reach out to the group and hopefully—I’m still working through it, but someone had a solution, a workaround that they got to be able to put them all on one page. So I’m looking forward to figuring that out.

Kirill: Okay. Yeah, there’s always these little workarounds that people come up with, and then eventually Tableau gets on their feet and they actually go and they create a new version which accommodates those requests. But it takes some time before those come through.

Megan: I think Tableau has been one of the companies that’s better about responding to that versus some of these traditional
companies that are so big and they’re such a bureaucracy to get things done. I think Tableau is a little bit better about moving pretty fast. One of the things I really wanted was custom regions and then—obviously, I only started working with it a few months ago, and then I got custom regions so it was really nice.

Kirill: Like a dream come true, right?
Megan: Yeah.

Kirill: Yeah, Tableau is pretty good in that sense. And how do you find the user community? How responsive, how friendly are they in the Tableau online community?

Megan: I honestly haven’t reached out much to the Tableau online. I don’t really post or anything like that. I usually just Google something and then I’ll end up finding it there, that someone else has already posted the question. But Northwest Arkansas is always friendly so everyone has been really responsive here, so it’s been good.

Kirill: Great. So if anybody has any questions about Tableau, go to Northwest Arkansas Tableau user group. By the way, if you live somewhere in Northwest Arkansas, maybe find Megan’s group. We’ll definitely include the links in our episode notes at the end of this episode. Okay, so we’ve talked about Tableau and how it’s a very good tool. Would you say that Tableau—how would you say Tableau is different to Excel? Obviously, a lot of organisations—I’m assuming you have prior experience, like in creating some visualisations, basic ones, doing some analytics in Excel. How would you say Tableau is different to Excel?
Megan: I think Tableau is nice because it really has a feature where you can dig down and you can really filter. So I feel like any time you look at data, you’re obviously looking through a filter. So for us, you look at total beer. So what’s happening in total beer. Then you look at what’s happening in the segment. Then what’s happening in your brands, and what’s happening in your items. And kind of that same idea of moving from a more general set of data down to something more specific. It’s something Tableau is really good at doing. Like, my scorecards I can look at "Here’s what’s happening total U.S. Here’s what’s happening in each region." If there is a region that’s down, I can look down to state level. Then I can look down all the way to store level, and you can actually see maybe it’s a certain area that something is going on. But really it’s generally more of the item trends. But you can use that same funnel methodology to really get down to what’s happening and really understanding what’s going on.

Kirill: And you mentioned scorecard. Could you explain that term a little bit, please?

Megan: Basically, the scorecard, or you could call it a dashboard, basically just understanding weekly what’s going on with the business. I think it’s pretty common. Anybody in sales has their Monday morning scorecards that they send out to the team, and you can quickly act on "Hey, what happened last week and is there anything we need to address to change it?" So from my end, it just shows the weekly trends, whether we’re meeting the plan for each of the buyers, how each of the brands are doing if there’s something—it’s a very general view that you can dig in deeper to improve.

Kirill: So these scorecards are kind of like dashboards. I’m assuming that you have a lot of data going through your
visualisations. Your visualisations—do you have to update the datasets every time or are they connected to live data sources?

Megan: I don’t have them connected to live data sources, no. So Wal-Mart data just has—you can pull daily data from Wal-Mart, but in general, I only pull it weekly. There’s no need to really pull it at a daily level.

Kirill: So you only need the weekly data, right?

Megan: Yeah, there’s enough opportunities in the weekly data. There’s not sufficient need for everything to pull up it the daily level, so I generally just pull weekly and then we work off that. It gets updated every Monday, so I think the data is pretty real-time, so it’s good.

Kirill: Okay. You’ve mentioned that these scorecards go out to many different people. Can you share a bit of your experience on how you go about the non-data ink on your visualisation, so things that are not related to data? So how do you pick the colours, how do you maybe format visualisations to make them look better for your audience? How do you place the different elements into your scorecard? How do you go about thinking about these things?

Megan: For brands, we definitely use the brand colours, which make a lot of sense. You know, Mike’s Hard Lemonade is yellow; Mike’s Harder is usually black—it’s our more younger brand, it’s more masculine, so I use black for that one; Palm Breeze is light blue. You go by logo colours, and then sales up or down generally. I try to keep it simple, so not too many colours, but brand colour is generally the main thing and
then, whether you have a negative, generally you try to highlight that.

Kirill: Do you include a logo in those dashboards as well?
Megan: I don’t. I don’t have a logo.
Kirill: Okay.
Megan: I haven’t gone that far in Tableau yet. I don’t know how to add a logo in.
Kirill: All right. Okay. That was very interesting. And what are your aspirations for learning Tableau going forward? Are there any topics that you really want to learn about?
Megan: I still feel like there’s so much you can do with Tableau that I really haven’t even—even though I do a lot with it every day and every week, but I think there’s—I don’t know what the topic is, but I know it’s probably out there. So I don’t have anything specific, but the time periods is for sure one I’m looking into.
Kirill: There’s definitely a lot. Like, even I catch myself sometimes that I don’t know this particular methodology or this technique or how to create this visualisation. Even just with Tableau, you can just keep learning and learning and learning all the time.
Megan: I thought about looking into SQL too, because I’m starting to run into file limitations. So I was thinking of looking into SQL, but I really don’t—I’m not a coding kind of a person, so Tableau is about as deep I can get. I have Access, you know, but other than Access and Excel I really don’t get into coding or anything like that. It’s nice that Tableau does that for you in general, so I have to a way around that. So maybe it’s
more of how I’m building my data. I know that can be a lot more efficient.

Kirill: Yeah, totally. And how large are your datasets?

Megan: Usually it’s over 2 million, I think.

Kirill: Wow.

Megan: It’s—say you have around a hundred items and then there’s around 4,000 Walmart stores and then you do weekly by store, so 52 x 4,000 x 100.

Kirill: Yeah, that’s a lot. That’s quite a rich dataset that you’re working with. What would you say has been the most useful technique for you in Tableau?

Megan: Being able to build hierarchies is pretty interesting, the hierarchies of your brand information. So even if you just say brand, then it goes down to your pack count and down to your product. What’s really cool is you can put that into your table and then it will show the brand’s totals. And then you just click on it and it will show you one level deeper. So then you can see like, "Oh, how are my variety packs doing versus how is all the six-packs doing?" And then you can go one level deeper and see how each of the actual items are doing, and you can even add in UPC. So even if it was something that maybe had two different UPCs on it or something, you could go down to that deeper level as well.

Kirill: What’s a UPC?

Megan: It’s the code that scans at the register. So whenever you’re at the grocery store they scan, they scan the UPC, basically. That’s what allows you to purchase things.
Kirill: That’s a really cool feature of drilling down. And what would you say is the one thing that people that are starting to learn Tableau should look out for and should maybe—what is the one thing they should focus on because it’s important and the one thing that they should look out for because it’s like an underwater stone that can put them off from learning Tableau.

Megan: Yeah, I would say one thing to really watch out for for Tableau is to make sure that you have your data built correctly in the backend, so making sure that you don’t have duplicate UPCs or anything like that. Because Tableau just aggregates everything so you’re going to get overstated data or something like that. Also I would watch out for having filters. So Tableau generally filters across everything. So sometimes if you have your filters hidden and you don’t keep good track of which filters are filtering which pages you can be like, "Why are our sales down this much?" And then you realise "Oh, I’m filtered on this one product," or "I’m filtered on this one week and I’m not showing last year’s weeks," or something. So I would say be aware of filters and which pages they’re on and also be aware of how you filter your data in the background to make sure you’re getting the right output.

Kirill: When you were talking about that UPC duplication in your data, I felt like you’ve encountered that situation yourself. Is that correct? Have you had some near misses with Tableau?

Megan: I do have a lot of data checks. I mean, if I did have one I generally—so before I send it out, I always like to check a few stores and just make sure of everything, do a gut check on it. I think when I was first building it, there was probably some of that, and then I realised "Oh, I have to build my
data differently." So yeah, during the process of building it, I definitely had to do that. So I generally use just a store/UPC combination though, so that generally helps. Yeah, it’s just the way you build your Access databases. I had a few different tries and I got it right eventually.

Kirill: Yeah, that’s good. And you brought up a very important concept of doing spot checks. I worked at Deloitte previously, and it’s an important thing that they focus on quite a lot. Not only should you double check the count of rows is the same in the original dataset and in your modified, and in what you import into Tableau or whatever other tool you’re using, but also when you’re actually done with the analysis, it’s a very good idea to go into the results and spot check certain things. Especially if there’s like a store that’s nearby you or a store you know a lot about that you have this intricate understanding of their store, and you spot check the result and then you’ll see something, and you might think "Oh, there’s no way that their revenue can be over a million dollars," or "There’s no way that they had a loss in this month because I know they had a profit because I know the manager there," and things like that. It’s always good to check these things when you’re running the results.

Actually I’ll give you an example—maybe this will give you an idea, like an idea for the future. You might some time apply this. When I was doing segmentation models, I would do a spot check which was kind of a different type of spot check – it was a check for just that things made sense. If I had a list of 10,000 people that I was doing this test for, the segmentation, I would take their phone numbers and I would take the last digit of their phone number – not the first, but the last digit of their phone number, and I’d look at
the distribution of the last digit or the people across the last digit, so I’d build a chart where on the X axis it’s 0,1,2,3 up to 9, and on the Y axis it’s the number of people that have that last digit. And obviously that distribution, if the dataset is not rigged, that distribution has to be uniform. So every number should have approximately the same amount of people that have that number in their mobile phone. That was kind of my spot check. Maybe you could do something similar with the UPCs. You could create the distribution and look at the last digit in the UPCs and see if that is uniform or not. How does that sound?

Megan: That’s interesting, that method. Generally I check directly with the Walmart data and make sure that matches up. And more of what I have an issue with is there’s always stores opening, so there’s stores opening every week and I have a “not matching” query in Access. That’s how I do my checks, basically. I find the missing UPCs, is there anything that doesn’t match, is there any store numbers that don’t match. So I usually work around it that way. So as long as it matches directly from a retail link pool and those all match, then I’m good to go.

Kirill: Okay. Yeah, that’s very important, to do spot checks on your datasets and results. All right, so that was very interesting. And can you tell us or share with us, if you’re able to disclose, what is the most recent win that you’ve had using Tableau in your day-to-day role?

Megan: Sure. So, there’s a lot of information that we get from our salespeople. Field sales, you know, they’re boots on the ground, they’re in the stores day in and day out. They know what’s going on. So what’s really interesting is Sam’s Club, which is owned by Walmart. A lot of times they build them
extremely close to Walmarts. Sometimes they even share the same parking lot. And we know that whenever we run demos in a Sam’s Club, we will see an increase in sales in the Walmart just because the demo is run in the Sam’s Club.

Kirill: That’s really cool.

Megan: Yeah, what’s interesting there is I was able to basically geocode all the stores and understand what the distance between the longitude and latitude was of these stores to figure out which of those stores shared parking lots, and then take the sales data to understand what our lift was for those stores. So you can say, "Hey, this demo not only helps the Sam’s Club but it also improves our sales in the Walmart right next to it." So it’s another benefit to help sell in those demos for the Sam’s Club.

Kirill: Okay. Very interesting. Can you walk us through a little bit about the way you thought. How did you come up with this solution to this somewhat complex and seemingly impossible business challenge?

Megan: I mean, a lot of times you just hear what’s going on, and then you think, "Hmm, I wonder if it would be helpful to have quantitative data behind that." I already had all the Wal-Mart stores geocoded and I knew that it was possible to geocode the Sam’s stores. And then I looked online – Google is a fantastic resource – I just looked up how to find the difference between longitude and latitude. I was able to click through a few links and I found an Excel formula that could calculate the distance, and then I was able to put that into my file and then say "If the distance is less than one mile, then it’s next to it." And then I could take that group of
stores and create that custom group and then compare it against the other stores.

Kirill: Okay. That’s a very interesting solution. So you actually found—algorithmically determined which stores are next to each other and from that—so you didn’t have to like place them manually on the map or select manually. Everything was done through a formula. Is that correct?

Megan: Yes, that’s correct.

Kirill: All right. That was a very interesting example of a successful project that you had using Tableau. And what would you say is your one most favourite thing about being empowered with Tableau in your day-to-day role?

Megan: I just love the depth of insights you can get so quickly. So with Tableau, like I said, there were so many ad hoc questions I was getting that were taking me much too long of a time to get those done. Being able to really dive into any question very quickly is nice. Also, looking into demographic data. So Walmart obviously has a wealth of data, and I’m able to use some of that to understand what’s happening in groups of stores. So if we know a group of stores is a more affluent group of stores, we can understand how certain products perform so you understand, "Oh, this group of products performs better in affluent stores. This group of products performs better in stores that are near a lake." You know, there’s all sorts of traits that you can utilise with Walmart’s data in order to understand what groups of stores perform better with a new product.

Kirill: Yeah, that’s something that Tableau can definitely help you out with and I can see how that can be useful. And from where you stand with how you’re using Tableau in your day-
to-day role, obviously you can see that it’s changing the way that you perform your work and the way you think about analytics and reporting. What do you see the future of visualisation is in organisations? Do you think it will be adopted more and more by different organisations around the world?

Megan: Yes, I definitely think it will. Like we talked about earlier with having IRI and Nielsen, and how they have such a wealth of data, but that data comes in and it’s not a—it’s just basically a data pull. So it’s just a table. They’re trying to do more with creating more visuals, but I think they’re just so far behind Tableau because of Tableau’s size and its ability to be so agile in the market. I think if you had something that combined the visualisation power of Tableau with the wealth of data of these huge corporations, I think that would be amazing and that would really change the whole consumer product goods industry for the better. So I think visualisations are definitely here to stay. No one wants to look at a table of data. They want to look at something visually appealing that they can quickly understand what the insight is there. That’s what I try to do from a day-to-day basis. I try to make data look pretty.

Kirill: Yeah, definitely. And that’s very in line with Tableau’s mission. Their mission is to help people see and understand their data. Seeing data is a very new—I wouldn’t say new concept, but a concept that’s getting a lot of traction now because there’s so much data and it definitely is important to be able to see it. Leveraging on that question, how do you find the different parts of working with Tableau? Like, which do you find more complex? Is it creating the visualisation?
Or is it conveying the insights to the people that are asking for them?

Megan: They actually are one and the same for me. So I created that, like I said, the Tableau story. So what I do is I already have all these visualisations kind of ready to go in that—like I spoke about the funnel, so "Here’s what’s going on in Total U.S. Here’s what’s going on with your brands," and being able to funnel down deeper and deeper. So I kind of have this set story that I have the visualisations. I mean, we just do a quick one-hour download on Monday mornings to say "Hey, here’s what’s going on with the category," and then it’s a nice start to the week. You understand what’s going on and where your biggest opportunities are. So one and the same; and Tableau’s been really great at making that possible.

Kirill: Yeah. I’m really glad to hear how you’re using Tableau at work and I’m sure a lot of our listeners will find this valuable as a great example of how in a short three months, you’ve picked up such a complex tool and you’ve already started applying it and it’s making your life easier and you’re seeing great results. So thank you very much for sharing all of that. It was fantastic having you on the show. And just for our listeners, how can they contact you, follow your career and, of course, how can they find this Arkansas Tableau user group?

Megan: You can reach out to me on LinkedIn, so just "Megan Putney". And our Tableau user group, I would just look for it on the Tableau website; or we do have a Facebook page if you’re here local in Northwest Arkansas. Otherwise we do have an e-mail. Once you come to a meeting you can get on the e-mail listserv.
Kirill: Okay. Sounds good. We’ll definitely include all of those links to the group on Tableau, to the Facebook page, and to your LinkedIn. Thank you so much. And one final question: What is your one favourite book that you think can help our listeners become better data scientists or data analysts?

Megan: My book is not necessarily exactly data related, but I think it helps a lot in different things that you do every day. The book is "The Power of Habit" by Charles Duhigg. So what was really interesting, one of the stories that stuck out to me in this book was he worked as a reporter in Iraq and he found out that the military was actually able to break up riots simply by banning food trucks from selling in the plazas. And it turns out that riots actually form over time and people get hungry, and so they need the food trucks. So by taking away the food trucks, they were able to stop these riots from continually occurring. So I kind of like that example of something that you wouldn’t necessarily think is causing something else to happen, and I feel like in data, a lot of times it’s the same way. It’s something so innocuous, but it’s really causing this huge impact on your data, and I think that’s really interesting.

Kirill: Yeah, that’s a great example. I have to ask—so those trucks, did they actually still feed the people or what did they do with the food?

Megan: Oh, I don’t know. They just weren’t allowed in the plazas where everyone gathered, so they had to go elsewhere to get the food.

Kirill: Okay. Let’s assume they went elsewhere. I haven’t read the book in full, but I’ve had opportunities to get acquainted with some of Charles Duhigg’s principles. And in addition to
what you said, that it’s very similar to how data insights can sometimes come, or dependency can sometimes come, from where we don’t expect, this book is actually just a great read to develop certain habits. Like, he talks about rewarding yourself, like going to the gym and then actually eating chocolate after that, and you do that for 60 days and after that you don’t even need the chocolate anymore, you know, you’ve trained yourself.

I like how he talks about the willpower, that it’s like a muscle. You know, if you use your biceps throughout the day, you’ll get tired. Same thing with willpower. At the start of the day, willpower is very strong and that’s why it’s much harder to go to the gym in the evening when you come back from work, when you’re very tired, and so on. So he says that you have to train your willpower as well throughout the day so that you have more of it, and it’s normal if you feel that you’re using willpower towards the end of the day or after doing some strenuous activities, or like mind activities as will. Yeah, great book. Thank you for that recommendation. I’m sure our listeners—those who pick it up will definitely benefit from that. And once again, thank you so much for coming on the show. It was a pleasure to have you here.

Megan: Yeah, thanks so much for having me.
Kirill: All right. Bye, Megan, and best of luck with your Arkansas Tableau user group.
Megan: Thanks.
Kirill: Bye. So there you have it. I hope you enjoyed today’s podcast and you picked up quite a few new things. Personally for me, it was very impressive to see how Megan went from not

Show Notes: http://www.superdatascience.com/12
knowing Tableau at all to knowing it at that level at which she is right now just in three months. What a way to learn a new tool. What a way to get knowledge from the online resources that are available to everybody. So if you are looking to learn a new skill, if you are looking to learn a new tool, then just remember this story, and remember that you can go and pick it up online. You don’t have to go and do a degree. Doing a degree can be beneficial, without doubt. But sometimes, if you just need a specific tool, or a specific skill, it’s worthwhile looking online and finding out if you can get to the right resources, and maybe you can pick it up online. Just remember this story that it is possible, it can be done and it can be done very, very quickly. Just three months, as you can see.

And so a big shout-out to Megan for coming on the show and sharing her insights with us. Definitely check out their user group, especially if you’re in the Northwest Arkansas area. They’ll be happy to have you. Even if you don’t know Tableau but you’re into analytics, I highly encourage you to check them out. Tableau is a very good skill to pick up in any case, plus you get to hang out with some incredible people.

As always, you can get the show notes at www.superdatascience.com/12 and there you will find the transcript for this episode, all of the links to the materials we mentioned, and a URL to Megan’s LinkedIn. So go ahead, connect with Megan, and follow her career. And finally, if you’re listening to this podcast on iTunes, then please make sure to like us and rate us. It will really help us spread the word about the show. And thank you so much for your time.
today. I look forward to seeing you next time. Until then, happy analysing.