

Geraint Interview

Katie [00:00:00] So thank you for your time today. Um. So to start do you have any sort of personal bias towards either language used?

Geraint [00:00:14] Yeah, I use Python mostly, but I'm fairly new at R.

Katie [00:00:23] Okay.

Geraint [00:00:23] I probably understand the Python a lot more.

Katie [00:00:26] OK. And do you also have any sort of initial comments on the code, sort of anything like readability, notable similarities and differences?

Geraint [00:00:46] It's obviously a big difference in how R and python like implemented, right? I've only just got to starting to know about ggplot and I quite like the way ggplot does things. It's quite nice to do things on. Yeah, but. I dunno I'm obviously seeing the python a lot easier to read because I'm more used to it. Yeah, I don't know what else you'd like me to say.

Katie [00:01:19] Oh, no, it's just, um, I don't know, just to kind of get your general opinions on it, um, so that's perfect. And sort of kind of, well, on a similar-ish note, how do you feel like either code could be changed in any way in its implementation?

Geraint [00:01:39] OK, so speaking about the Python code first. There's a few things I've noticed that maybe I wouldn't have done, but like I'm really not that fussy about any of this. For example I know you've got, I believe, as your data is all in camel case. I don't think that's normal in Python. I think we usually do the snake case, is what they call it? And there was a couple of areas where I think you you defined local variables as the same thing as a global variable.

Katie [00:02:23] OK.

Geraint [00:02:23] Which I- I think probably technically works, obviously it works you've run this code, but I would have found that- I found that difficult to read like you were, you're defining a function viridis and then you were defining a variable viridis and I was like hang on, did you just overwrite the function?

Katie [00:02:42] Yeah, OK.

Geraint [00:02:48] And then a couple of your naming things, so nobst I didn't really know what that was, I guessing I what it is, but it's just naming things in general.

Katie [00:03:00] So I think it was just, so this is just- so I did sort of like define the variables and things further up but um, I think just because I wanted to get a general impression of the code instead of kind of, I don't know. I spoke to Vince as well and we just kind of decided like yeah, leave the sort of variable definitions out of it.

Geraint [00:03:21] OK, and this is not, God this is not a criticism.

Katie [00:03:25] No, no, it's okay, I'm not taking it as one.

Geraint [00:03:26] One of the first things I noticed. I think another thing I noticed was like when you define the colours you defined with hex code, which means you get the exact hex you want, but without looking at the plot, I don't know what that is.

Katie [00:03:43] OK, I'm going to show you a couple of plots and I'm going to ask some questions about them as well, so you'll see what the colour is.

Geraint [00:03:52] Like, I know in Python you can say, like, make this blue.

Katie [00:03:55] Yeah.

Geraint [00:03:55] And it might not be the blue you want, but at least without looking into the plot, I know what it's going to look like.

Katie [00:03:59] That's true. And sort of again with just like comparing the two languages, how well suited to visualisation, do you think each seems to be, sort of based on your own knowledge and these codes?

Geraint [00:04:20] I- I don't really like saying that one is better than the other or whatever.

Katie [00:04:25] You don't really have to say that they are better or worse, just how well suited do you think each of them are?

Geraint [00:04:30] Yeah, I think I think they are, they are both really well suited, especially with the ggplot library. I think the ggplot library does things really nice. It's when you're not used to it, it feels a little unintuitive, but then you realise that you can do like some really cool things with like one variable or something and it's really neat. I really like it. Like the I don't know what stands for the aes thing where you can just tell it what your axes are, and then soon as you've told it what the axes are just throw our data at it, and it's like oh, that's so nice.

Katie [00:05:05] Yeah, just all the, sort of, the aesthetic features of the are really easy to-.

Geraint [00:05:09] Yeah.

Katie [00:05:14] And so with Python, how well do you think that sort of suited?

Geraint [00:05:21] Um good, yeah, I think. I think matplotlib is- with, with Python you tend to like have one library, that does something really good, and matplotlib does it really, really good. And there are like two ways of doing things in matplotlib, like the object oriented way and then the just plot dot way. And I think the plot dot way, I find it a bit like un-pythonic, it's very different to how you write the rest of Python. Then the object orientated way, is making plots exactly like you write the rest of Python, which makes it really natural because-

Katie [00:06:04] Yeah okay, see I'm kind of some very heavily biasd towards R, so it's interesting.

Geraint [00:06:09] And with R- it's funny, like with R as well it's the opposite, like ggplot is very object oriented. whereas the rest of R is not.

Katie [00:06:16] Yeah, that is odd actually, so I've kind of done the opposite to each language.

Geraint [00:06:24] That's just the way people do it.

Katie [00:06:30] And sort of remember the like the two libraries. So if you had a beginner to visualisation which had an equal amount of R and Python experience, which do you think would be easier to pick up, ggplot or matplotlib?

Geraint [00:06:51] Probably matplotlib. I'm only saying that because I think the way matplotlib some of the syntax of it is very similar to the rest of Python. Like, dot bar is a function which takes two things during they're similar to how you use the rest of Python, whereas with ggplot, even though that aes thing is really nice, neat adding things to it, it's not like anything else you've seen in R, so it might be really hard to get.

Katie [00:07:19] Yeah, yeah, that's a good point. It's kind of a function within a function. And so I'm going to share a couple of plots now so you can see the hex code looks like as well. And yeah, I'll just sort of- want your opinions on, like, based on these, which do you think sort of gives the most publication ready output? Sort of.

Geraint [00:07:48] OK, so out of these two that I'm seeing. Oh, yeah, yeah, the left one? The one without the top and side.

Katie [00:07:59] Yeah, okay.

Geraint [00:08:01] But I think but I do think that's just opinion. I don't think it.

Katie [00:08:06] So this is just a very subjective interview. So I can kind of go, some people thought this, some people thought this.

Geraint [00:08:13] Yeah, that's the one I like more. I don't know what publications would like more but that's what I like more.

Katie [00:08:21] Okay, and then this one was interesting as well, because this is, obviously I changed it to a logarithmic scale. And these are just kind of the default- what the different languages default if you change it to a logarithmic scale.

Geraint [00:08:38] So I, I rather the one where it's got 10 to the 0, 10 to the 1. I think that's a lot clearer about what's going on there. I suppose with the other one, well no it is, it is the actual values, it just feels really random until you- unless you knew it was a long scale, you just you've got to really look to see.

Katie [00:09:03] Yeah.

Geraint [00:09:03] If it's a large scale where it's 10 to the 0, 10 to the 1, it's really clear that that's a log scale

Katie [00:09:09] What I have found really interesting is that in a few of these interviews sort of a couple of you prefer the '10 to the' scale, but then that scale confused a lot of people in the survey as well.

[00:09:21] Oh really, okay.

Katie [00:09:24] I think said I shared it on the dissertation exchange. There's a lot of people that don't normally use logs and things. So I just, I just found that really interesting.

Geraint [00:09:34] Do you reckon, because maybe we've got- we're at different levels of how much we know maths, like your lecturer and PhD student. I don't know. I don't know.

Katie [00:09:47] I just , cause I've taken sort of university subjects and things, so be interesting to look at that, see who was-

Geraint [00:09:55] Neat, yeah, nice

Katie [00:09:58] But I think the only- another thing I've got actually is how much freedom do you think each language, or each library provides in terms of customisation features and things, I think you've like briefly been into it already.

Geraint [00:10:13] I, yeah, I, I think they both probably do just as much customisation, but I would find customising things in matplotlib a lot easier. I feel like, even if you don't know what's going on, you know how to change things because you know how to access the ticks or whatever whereas with ggplot you've got to have this new object on and then you've got to go look something up.

Katie [00:10:41] Yeah, okay, and just finally, have you got any sort of other comments about it at all, that you've thought of?

Geraint [00:10:52] No, not really. I can see- I don't know if these plots, especially the matplotlib ones I'm thinking of. Did you write those with Vince or did you write them yourself?

Katie [00:11:04] I wrote them myself, yeah.

Geraint [00:11:07] Okay, as it you were doing something there that Vince does a lot of, which I don't because I- so you've put all those in functions.

Katie [00:11:16] Okay, yeah.

Geraint [00:11:16] Vince loves a function, whereas I like functions for most things, plotting is one of the ones that I just don't see why we do it functions whereas Vince really likes putting them in functions, so it's just interesting that you used functions.

Katie [00:11:29] I default to doing that in R, so I think it's just kind of transitioned across. But I don't know if that because also obviously I don't know, I've obviously recently been taught by Vince computing in first year and game theory like last year, I could have subconsciously absorbed some of that.

Geraint [00:11:48] Yeah, he loves a function. I've been writing- well I've worked a lot with Vince and when we write code together he puts everything in a function and they're going like, does this really need to be a function like just makes it more complicated. But that's obviously subjective opinion as well.

Katie [00:12:04] Anyway, thank you for that, that was good.

Geraint [00:12:10] Cool, is there anything else you'd like from me?

Katie [00:12:12] No, that's everything. Thanks. That's great

Geraint [00:12:15] No problem. Good luck with the dissertation.

Katie [00:12:17] Thank you. Have a good rest of your day.

Geraint [00:12:19] Bye.

Katie [00:12:19] Bye.