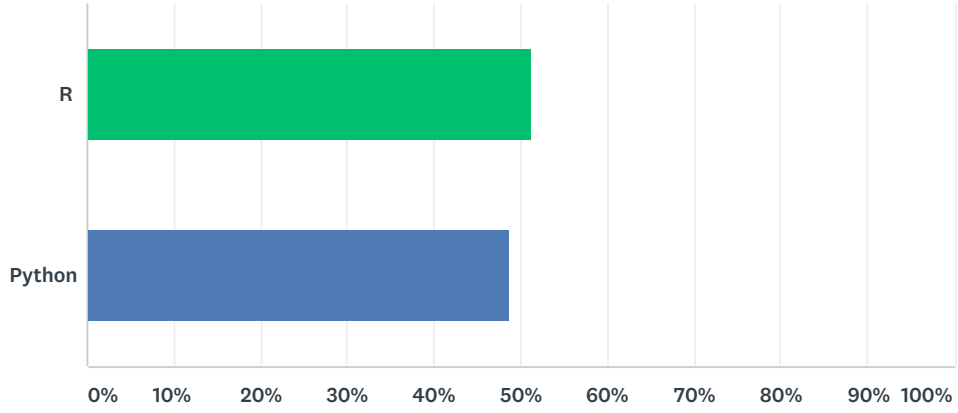
Q1 Which workshop did you attend?

Answered: 41 Skipped: 0



ANSWER CHOICES	RESPONSES	
R	51.22%	21
Python	48.78%	20
Total Respondents: 41		

Q2 With which programming languages could you write a program from scratch that reads a column of numbers from a text file and calculates mean and standard deviation of that data?

Answered: 39 Skipped: 2

#	RESPONSES	DATE
1	Python, Excel, Matlab	6/17/2019 9:17 AM
2	R	6/14/2019 5:07 PM
3	R	6/14/2019 4:28 PM
4	Python	6/14/2019 4:28 PM
5	C++, MATLAB, python	6/14/2019 4:27 PM
6	Python, C++, Java, R	6/14/2019 4:27 PM
7	C++, VBA, Python	6/14/2019 4:27 PM
8	python	6/14/2019 4:26 PM
9	None	6/14/2019 4:26 PM
10	Python, matlab, R	6/14/2019 4:26 PM
11	like any of them? python	6/14/2019 4:26 PM
12	python, R, linux	6/14/2019 4:26 PM
13	Python, R, MATLAB	6/14/2019 4:26 PM
14	R, Python, MATLAB	6/14/2019 4:26 PM
15	Java, python	6/14/2019 4:26 PM
16	Python	6/14/2019 4:25 PM
17	R, Matlab, Java, C++, JMP	6/14/2019 4:25 PM
18	C++, Python, and R	6/14/2019 4:25 PM
19	Now python!	6/14/2019 4:25 PM
20	R and Python	6/14/2019 4:25 PM
21	matlab	6/14/2019 4:25 PM
22	Python, matlab, R	6/14/2019 4:25 PM
23	R, python, MATLAB	6/14/2019 4:25 PM
24	matlab, python	6/14/2019 4:25 PM
25	matlab	6/14/2019 4:24 PM
26	R, matlab	6/14/2019 4:24 PM
27	c, c++, python	6/14/2019 4:24 PM
28	MATLAB, R	6/14/2019 4:24 PM
29	Mathematica	6/14/2019 4:24 PM
30	java, matlab, python	6/14/2019 4:24 PM
31	Python, R, SQL, VBA, Spotfire	6/14/2019 4:24 PM
32	r	6/14/2019 4:24 PM
33	Python, R, MATLAB, VBA	6/14/2019 4:24 PM

34	Matlab Python	6/14/2019 4:24 PM
35	Java, R, Matlab	6/14/2019 4:23 PM
36	R	6/14/2019 4:23 PM
37	R	6/14/2019 4:23 PM
38	matlab, python	6/14/2019 4:22 PM
39	R and Python	6/14/2019 4:21 PM

Q3 In three sentences or less, please describe your current field of work or your research question.

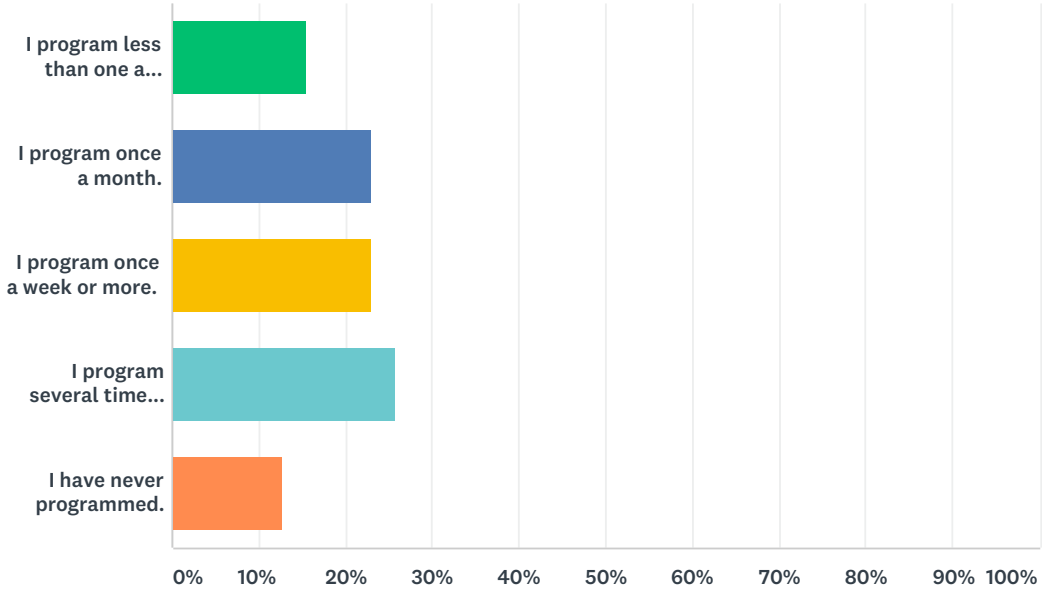
Answered: 38 Skipped: 3

#	RESPONSES	DATE
1	Biomedical engineering undergraduate student. Interested in pursuing research in drug delivery, pharmaceuticals, or antibodies.	6/17/2019 9:17 AM
2	I am studying nanomedicine and their biological effects.	6/14/2019 5:07 PM
3	Analytical chemistry	6/14/2019 4:28 PM
4	I'm working in Pre-Therapeutic Target Discovery. My project relates comparing the phenotypes of different mouse models, specifically looking at hematology and serum chemistry data.	6/14/2019 4:28 PM
5	Student finishing a bachelor's degree in chemical engineering. Interning under preclinical manufacturing and process development for a biopharmaceutical industry	6/14/2019 4:27 PM
6	I am working in the DNA Core, where I am writing a program to edit the output txt files produced by the 12K PCR, so that they can be analyzed by old macros	6/14/2019 4:27 PM
7	I am in Chemical Engineering and have been working on automation for my team to help improve their efficiency.	6/14/2019 4:27 PM
8	PLA amplification	6/14/2019 4:26 PM
9	Right now I am a student planning to major in Computer Science.	6/14/2019 4:26 PM
10	optimize analytical method of antibody drug conjugates (ADC) and quantify large scale datasets	6/14/2019 4:26 PM
11	Looking at current literature and data to investigate potential drug targets	6/14/2019 4:26 PM
12	building a model to translate mouse expression data to human conditions	6/14/2019 4:26 PM
13	cardiovascular disease: how can we find targets in coagulation/fibrinolysis pathways to treat diseases like thrombosis	6/14/2019 4:26 PM
14	Neuroscience - analyzing and integrating single-cell RNA seq data from multiple studies	6/14/2019 4:26 PM
15	I'm majoring in computer science and for my internship I'm working on QlikView dashboards and using general scripting.	6/14/2019 4:26 PM
16	Medical Imaging	6/14/2019 4:25 PM
17	Data analysis for department of manufacturing and production	6/14/2019 4:25 PM
18	Studying mechanical engineering and interning in Automation Technologies	6/14/2019 4:25 PM
19	Evolution of viruses and viral emergence	6/14/2019 4:25 PM
20	I am a math & stats major doing data analytics for the Strategic Sourcing & Procurement department.	6/14/2019 4:25 PM
21	chemical engineering biochemistry process optimization	6/14/2019 4:25 PM
22	Biomedical Engineering	6/14/2019 4:25 PM
23	Biochemical engineering for process development of antibody purification.	6/14/2019 4:25 PM
24	chemical engineering	6/14/2019 4:24 PM
25	Pharma	6/14/2019 4:24 PM
26	purification development	6/14/2019 4:24 PM
27	I conduct research in the field of cardiovascular and renal diseases.	6/14/2019 4:24 PM
28	bioengineering, evaluating new fluorphores for use with flow cytometry	6/14/2019 4:24 PM
29	PMPD Data analysis	6/14/2019 4:24 PM

30	in the lab working with pulmonary fibrosis human cells	6/14/2019 4:24 PM
31	Data management	6/14/2019 4:24 PM
32	Opthalmology	6/14/2019 4:24 PM
33	Quantify images of neurons for analyzing traumatic brain injury and its treatments	6/14/2019 4:23 PM
34	Evaluate macrophage phagocytosis of tumor cell capacity after blocking CD47 and other targets using antibodies.	6/14/2019 4:23 PM
35	lab maintenance	6/14/2019 4:23 PM
36	chemical engineering	6/14/2019 4:22 PM
37	Developing AlphaLISA immunoassay	6/14/2019 4:21 PM
38	immune-oncology	6/14/2019 4:20 PM

Q4 What best describes how often you currently program?

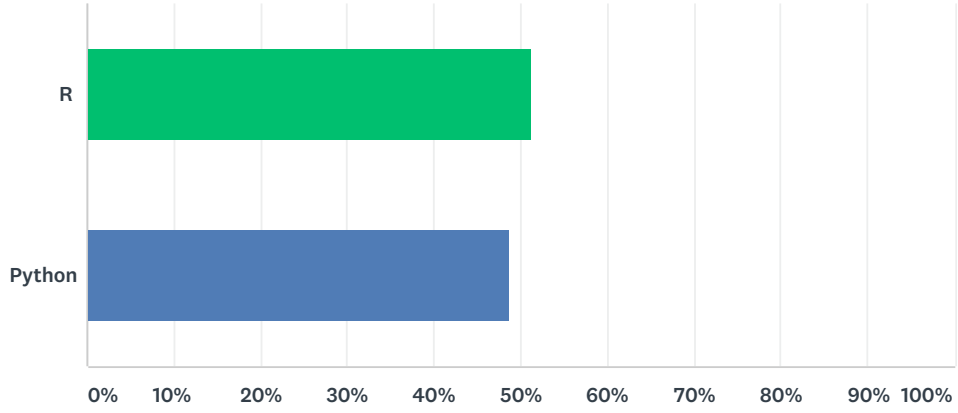
Answered: 39 Skipped: 2



ANSWER CHOICES	RESPONSES	
I program less than one a year.	15.38%	6
I program once a month.	23.08%	9
I program once a week or more.	23.08%	9
I program several times a year.	25.64%	10
I have never programmed.	12.82%	5
TOTAL		39

Q5 What programming language was used in your workshop?

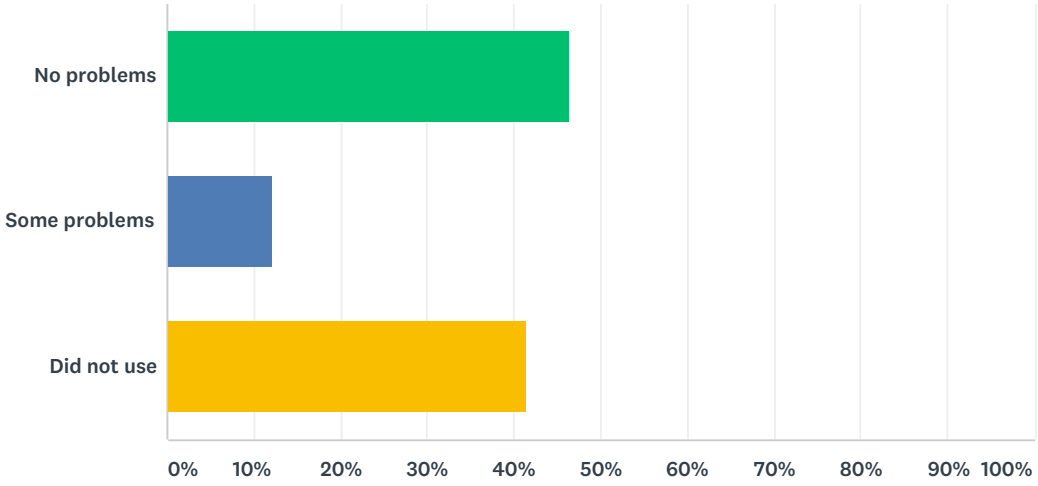
Answered: 41 Skipped: 0



ANSWER CHOICES	RESPONSES	
R	51.22%	21
Python	48.78%	20
Total Respondents: 41		

Q6 How well did the following technology work in your workshop? [RStudio server]

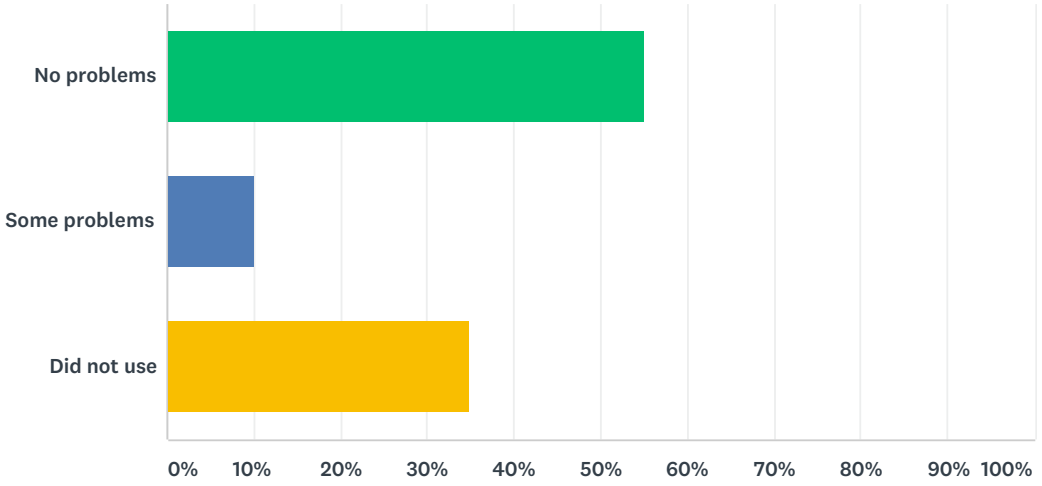
Answered: 41 Skipped: 0



ANSWER CHOICES	RESPONSES	
No problems	46.34%	19
Some problems	12.20%	5
Did not use	41.46%	17
TOTAL		41

Q7 How well did the following technology work in your workshop? [JupyterHub server]

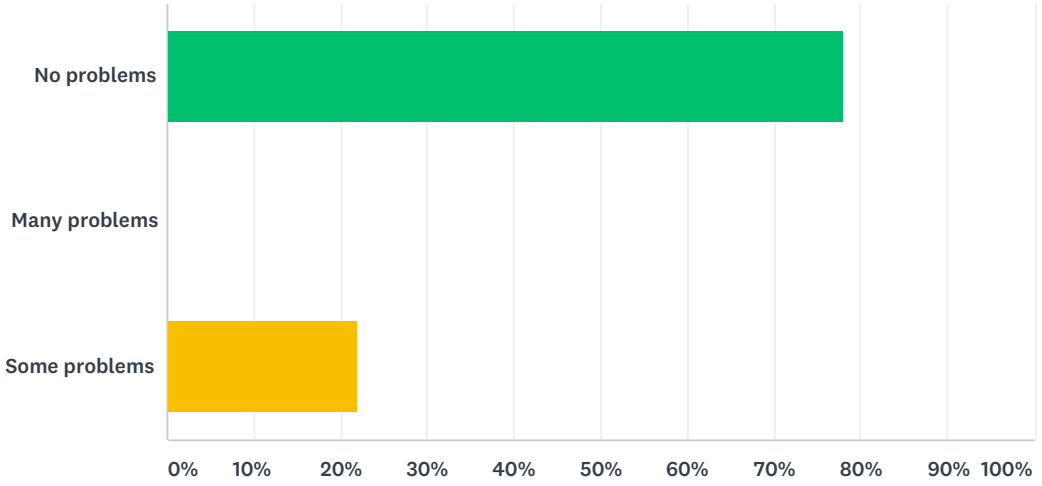
Answered: 40 Skipped: 1



ANSWER CHOICES	RESPONSES	
No problems	55.00%	22
Some problems	10.00%	4
Did not use	35.00%	14
TOTAL		40

Q8 Were there any problems encountered during the following topics? [Shell]

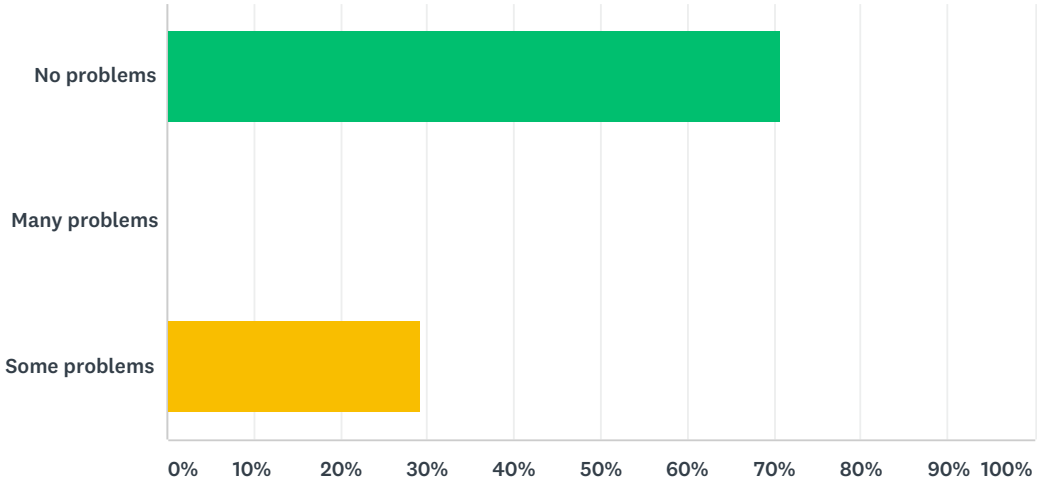
Answered: 41 Skipped: 0



ANSWER CHOICES	RESPONSES	
No problems	78.05%	32
Many problems	0.00%	0
Some problems	21.95%	9
TOTAL		41

Q9 Were there any problems encountered during the following topics? [Programming]

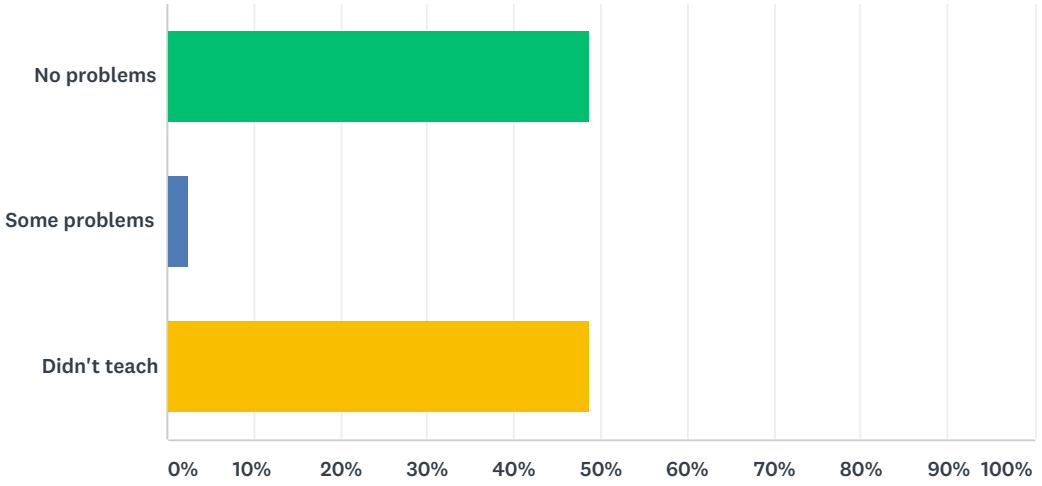
Answered: 41 Skipped: 0



ANSWER CHOICES	RESPONSES	
No problems	70.73%	29
Many problems	0.00%	0
Some problems	29.27%	12
TOTAL		41

Q10 Were there any problems encountered during the following topics? [Version Control]

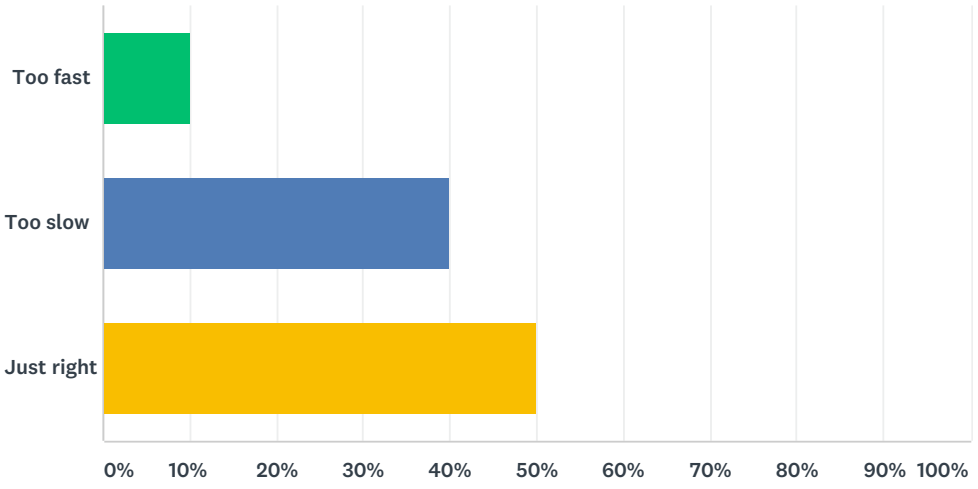
Answered: 41 Skipped: 0



ANSWER CHOICES	RESPONSES	
No problems	48.78%	20
Some problems	2.44%	1
Didn't teach	48.78%	20
TOTAL		41

Q11 Please indicate the pace of instruction [Shell]

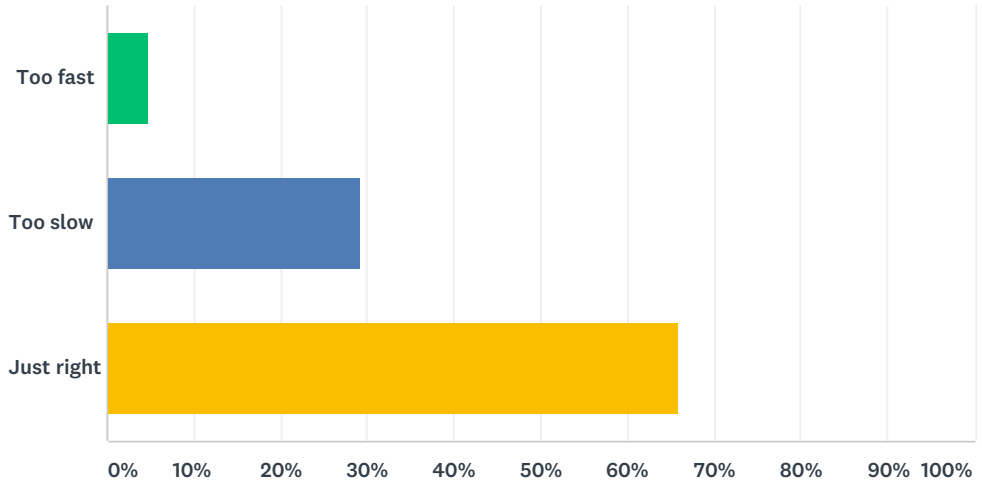
Answered: 40 Skipped: 1



ANSWER CHOICES	RESPONSES	
Too fast	10.00%	4
Too slow	40.00%	16
Just right	50.00%	20
TOTAL		40

Q12 Please indicate the pace of instruction [Programming]

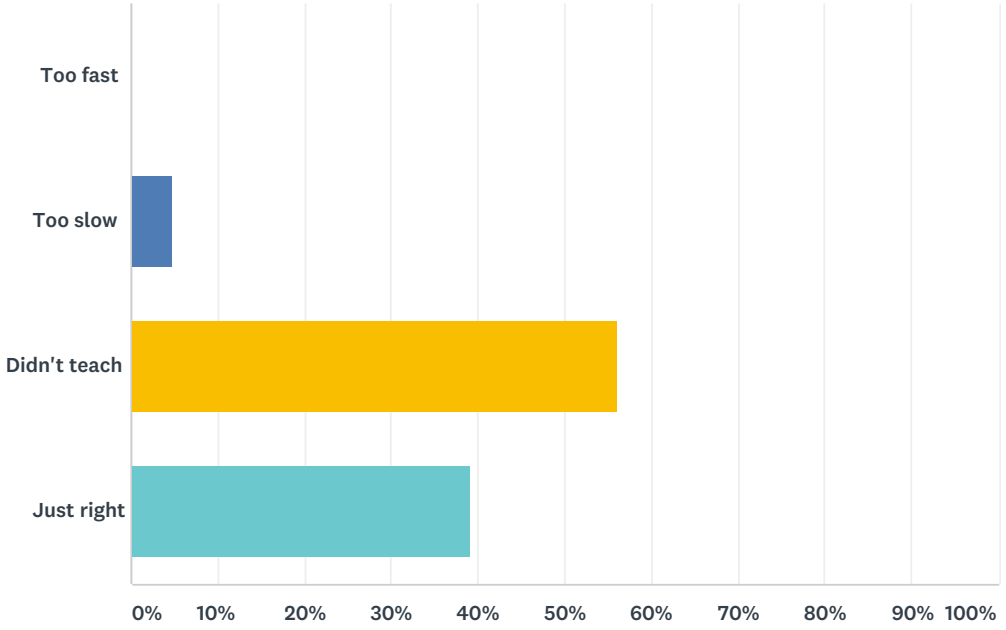
Answered: 41 Skipped: 0



ANSWER CHOICES	RESPONSES	
Too fast	4.88%	2
Too slow	29.27%	12
Just right	65.85%	27
TOTAL		41

Q13 Please indicate the pace of instruction [Version Control]

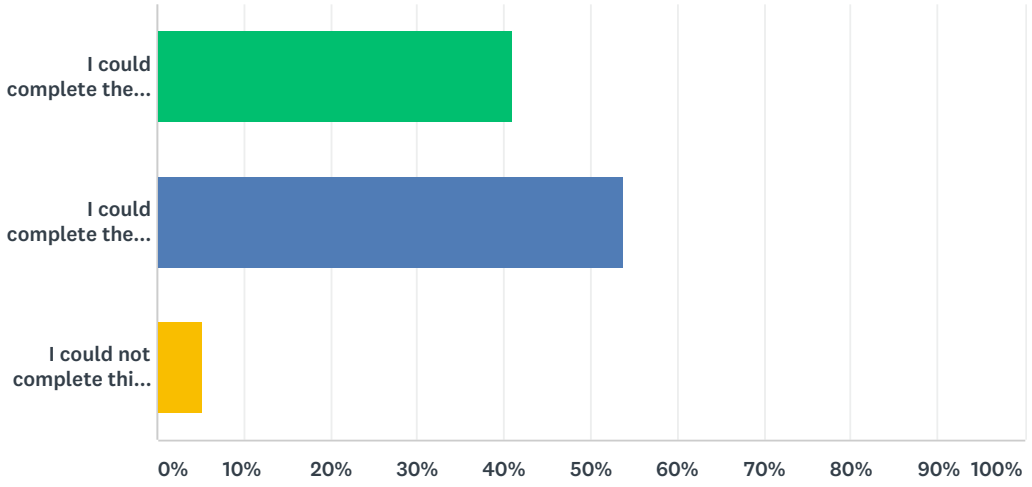
Answered: 41 Skipped: 0



ANSWER CHOICES	RESPONSES	
Too fast	0.00%	0
Too slow	4.88%	2
Didn't teach	56.10%	23
Just right	39.02%	16
TOTAL		41

Q14 Consider this task: A comma-delimited file has two columns showing the date and the number of sun spots recorded for that day. Write a program to produce a graph showing the average number of sun spots for each month.

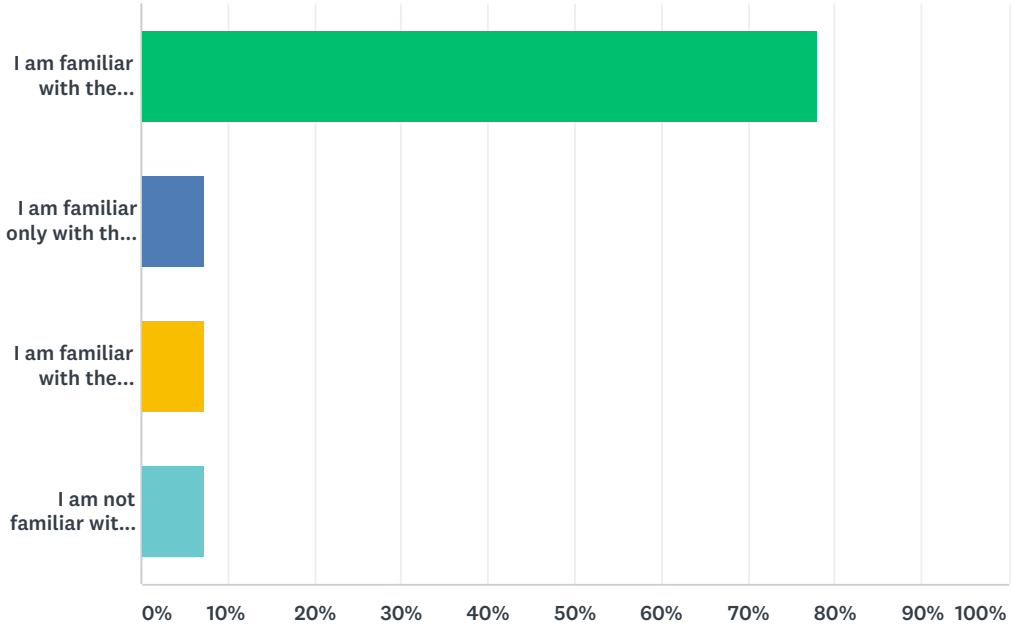
Answered: 39 Skipped: 2



ANSWER CHOICES	RESPONSES	
I could complete the task with documentation or search engine help.	41.03%	16
I could complete the task with little or no documentation or search engine help.	53.85%	21
I could not complete this task.	5.13%	2
TOTAL		39

Q15 How familiar do you think you are with the command line?

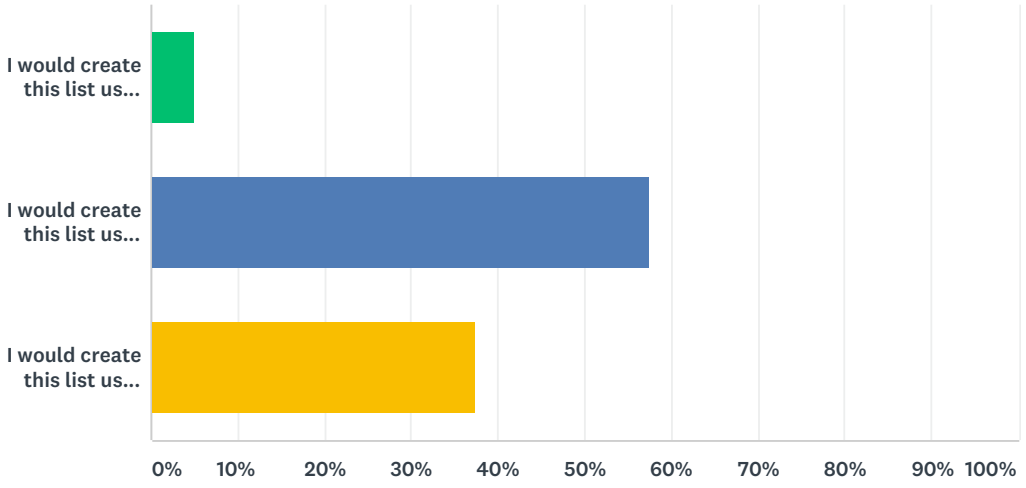
Answered: 41 Skipped: 0



ANSWER CHOICES	RESPONSES	
I am familiar with the command line because I have used or am using it.	78.05%	32
I am familiar only with the term "command line".	7.32%	3
I am familiar with the command line but have never used it.	7.32%	3
I am not familiar with the command line.	7.32%	3
TOTAL		41

Q16 How would you solve this problem? A directory contains 873 named text files. Create an alphabetical sorted list of all files beginning with '2009' and save the results as results.txt.

Answered: 40 Skipped: 1



ANSWER CHOICES	RESPONSES	
I would create this list using "Find in Files" and "copy and paste."	5.00%	2
I would create this list using a pipeline of command line programs.	57.50%	23
I would create this list using basic command line programs.	37.50%	15
TOTAL		40

Q17 Please list some things what you found good about the training workshop.

Answered: 36 Skipped: 5

#	RESPONSES	DATE
1	Feedback was encouraged, lots of interaction, short lectures, good challenges to gauge understanding.	6/17/2019 9:17 AM
2	Explanation of the logic behind language helps understanding	6/14/2019 5:07 PM
3	The instructions and instructors were often clear and easy to understand	6/14/2019 4:28 PM
4	I think the challenges were an effective means of learning.	6/14/2019 4:28 PM
5	Covered a good overview of the basics of python, and how the syntax may differ from other object-oriented languages.	6/14/2019 4:27 PM
6	I learned a lot about the terminal, which I was never taught in school. Also I learned many ways to organize and analyze large sets of data	6/14/2019 4:27 PM
7	I thought the instructors and helpers were knowledgeable and wanted to help us learn and improve. It was nice to see that they actually tried to put together a helpful training for us to participate in!	6/14/2019 4:27 PM
8	I like the green and red sticky method of teaching.	6/14/2019 4:26 PM
9	I found the structure of the lessons very useful -- kept building on each other.	6/14/2019 4:26 PM
10	The lesson is easy to follow and the content taught is very useful in daily research environment. The challenge problems are interesting to work with.	6/14/2019 4:26 PM
11	Easy to follow, I like that the lessons were easy to access with questions along the way	6/14/2019 4:26 PM
12	helpers are nice	6/14/2019 4:26 PM
13	I liked that there were notebook outlines at the end so we didn't have to type as much secondary info	6/14/2019 4:26 PM
14	Good amount of material covered and difficulty, really good text instructions to accompany the material (I will probably refer back to this several times)	6/14/2019 4:26 PM
15	I thought this training went really well, I'm a computer science major so I have a lot of experience and wasn't sure how much I would learn but I never learned python and I got a lot out of this! Both instructors kept a good pace for beginners and people with more experience and I liked the use of jupyter notebooks for notetaking and actively testing out code.	6/14/2019 4:26 PM
16	Great intro and pace	6/14/2019 4:25 PM
17	Taught me the material in a concise and clear manner, with a good level of depth into the language.	6/14/2019 4:25 PM
18	Well-structured and helpful by providing good challenges for us to try on our own	6/14/2019 4:25 PM
19	I feel like I understand a lot more about how to go about looking for ways to analyze my data. Previously programming was a complete mystery	6/14/2019 4:25 PM
20	I really liked the challenges and the pace of the class. I also really liked how we were able to check in after every break.	6/14/2019 4:25 PM
21	exposure to code troubleshooting and lots of helpers	6/14/2019 4:25 PM
22	The challenges were helpful, and it's nice to have a website to refer to later on	6/14/2019 4:25 PM
23	The lesson plans were very helpful and well laid out, with lots of examples and explanation.	6/14/2019 4:25 PM
24	very informative, thorough explanations	6/14/2019 4:24 PM
25	Lots of breaks	6/14/2019 4:24 PM

26	right pace, ease of understanding	6/14/2019 4:24 PM
27	There were a lot of very clear, concise explanations.	6/14/2019 4:24 PM
28	learning new libraries and where to find more	6/14/2019 4:24 PM
29	helpers were helpful	6/14/2019 4:24 PM
30	very informative	6/14/2019 4:24 PM
31	I loved learning to use Jupyter, and how we covered the unix command line	6/14/2019 4:24 PM
32	I learned a new programming language and how to use to to illustrate data	6/14/2019 4:23 PM
33	The material and documentation was really good, the inclusion of challenges was good. The use of sticky notes was also clever.	6/14/2019 4:23 PM
34	Having the info online to follow along	6/14/2019 4:23 PM
35	examples	6/14/2019 4:22 PM
36	it was well paced and touched on many useful aspects of R	6/14/2019 4:21 PM

Q18 Please let us know how you think future training workshops could be improved.

Answered: 33 Skipped: 8

#	RESPONSES	DATE
1	Feedback was asked too many times.	6/17/2019 9:17 AM
2	Explaining logic is more important than giving specific examples.	6/14/2019 5:07 PM
3	Be sure to start off slowly to provide a good foundation	6/14/2019 4:28 PM
4	I think if basic jargon were explained at the beginning, it would be much more useful. Explaining when to use () vs [] or when to use a "." in python programming would be helpful to promote intuitive use. I felt I could only complete challenges successfully when directly shown how to program something similar beforehand. Promoting intuition through explaining these basic patterns would help problem solve.	6/14/2019 4:28 PM
5	What was the point of learning UNIX in the beginning of the training? How does it apply to python? This should be a little more clear to those learning for the first time. I really really enjoyed the exercises and working through examples. Definitely integrate more of that in the future!	6/14/2019 4:27 PM
6	The workshop was very good, but maybe there can be different groups for people with different levels of experience in coding	6/14/2019 4:27 PM
7	I don't think there is much to improve on! Maybe just slow down a little bit occasionally and do a problem or two that you work through with us live and then have us do problems on our own. Overall it was good!	6/14/2019 4:27 PM
8	Some of the help staff are encouraging and some were like I am only here to help with fixing mistakes in your code, not teaching you what each thing means.	6/14/2019 4:26 PM
9	Some sessions took longer than supposed to in order to explain everything -- so perhaps give more time to some confusing portions.	6/14/2019 4:26 PM
10	Teaching pace can be faster, especially when teaching basic things so more contents can be covered in workshops. Thanks!	6/14/2019 4:26 PM
11	I think a 5 minute introduction to what a program is would have been great. I've never programmed before and some lingo was never explained (example, i still don't know what an argument is other than a vauge idea it's what you tell the computer to do), also I really wish there were more practical examples of how this could apply to research or the real world, but overall good training	6/14/2019 4:26 PM
12	Make it over the span of more time, with shorter working intervals	6/14/2019 4:26 PM
13	Use data from our field (e.g. RNA expression or other genetics data for REGN interns rather than the GDP dataset); improve the energy of lecturers to stimulate more student interest; improve the pacing: some topics were covered very quickly (often the more interesting ones), while other topics were rushed through because we ran out of time	6/14/2019 4:26 PM
14	I think maybe there could be another level up because I would definitely take another, but other then that no improvements.	6/14/2019 4:26 PM
15	Set up a second projector for graphs and other figures.	6/14/2019 4:25 PM
16	N/A	6/14/2019 4:25 PM
17	The second day was much better because it was much more active. I think the first day could go a little faster, speaking as someone who has never programmed before ever. I was a bit bored on the first day, but the second day I was really engaged, and it was hard. I wish we could have started some of the more complicated functions earlier because it would give us a chance to master them.	6/14/2019 4:25 PM
18	I think doing things a little faster in the beginning so the end wasn't so rushed.	6/14/2019 4:25 PM
19	dont switch between coding and graphs so fast, leave code on screen for people to catch up before switching	6/14/2019 4:25 PM

20	Maybe a slightly faster pace through some of the beginning topics like variable types.	6/14/2019 4:25 PM
21	spend more time on the harder topics and less time on the easy ones	6/14/2019 4:24 PM
22	Speaker system	6/14/2019 4:24 PM
23	increase the duration of workshop and increase the difficulty level	6/14/2019 4:24 PM
24	Moderate time a little bit better.	6/14/2019 4:24 PM
25	possibly split up the group in to beginners and intermediate programmers	6/14/2019 4:24 PM
26	too easy and too slow	6/14/2019 4:24 PM
27	(none)	6/14/2019 4:24 PM
28	I wish there was more time to complete the rest of the modules. If possible, maybe a separate workshop for people familiar with a language to get more in-depth	6/14/2019 4:24 PM
29	Please generate more interest in the subject by showing more applications of the language and making the course more interesting through instructor engagement	6/14/2019 4:23 PM
30	Programming is hard to teach, still I think the method wasn't great. The instructors need to engage with the public more and be able to read how they are doing. Look up every once in a while. Often they went too fast or scrolled up too fast and it was hard to follow.	6/14/2019 4:23 PM
31	If the instructors were more prepared with what they were going to be teaching	6/14/2019 4:23 PM
32	speed up pace and provide extra challenge problems for those who are working at a quicker pace	6/14/2019 4:22 PM
33	it was a lot to digest in 2 days, consider doing more spread out half days	6/14/2019 4:21 PM