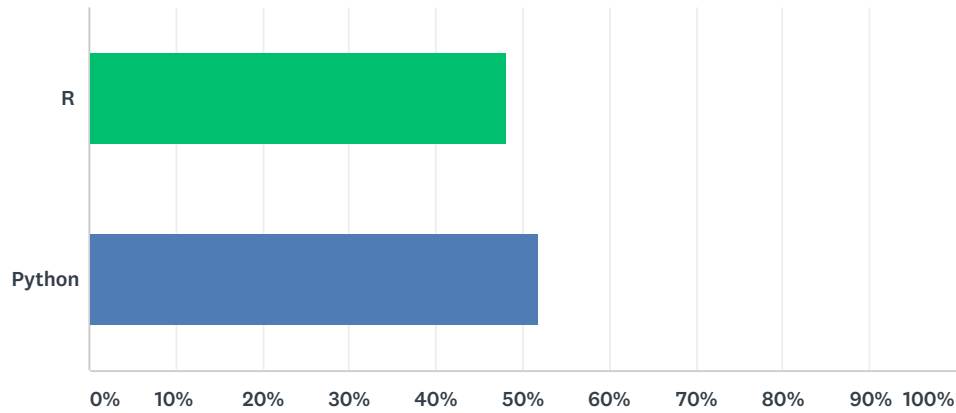


## Q1 Which workshop do you plan to attend?

Answered: 56 Skipped: 0



ANSWER CHOICES	RESPONSES	
R	48.21%	27
Python	51.79%	29
Total Respondents: 56		

## Q2 What is your career stage?

Answered: 56 Skipped: 0

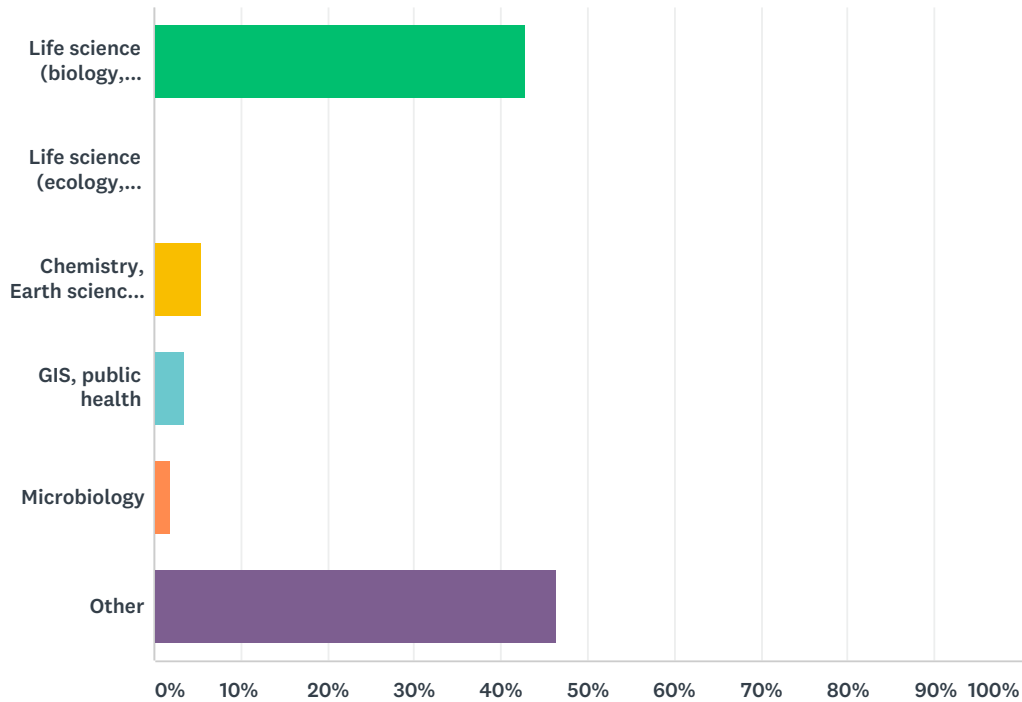
#	RESPONSES	DATE
1	co-op	6/14/2019 9:03 AM
2	Pursuing Bachelors Degree	6/13/2019 10:42 AM
3	Early	6/13/2019 9:18 AM
4	Undergraduate student	6/13/2019 8:49 AM
5	intern	6/13/2019 8:48 AM
6	Graduate Intern	6/13/2019 8:37 AM
7	Intern/Student	6/13/2019 8:30 AM
8	Co-op	6/12/2019 5:04 PM
9	Student	6/12/2019 3:49 PM
10	Intern	6/12/2019 3:23 PM
11	student	6/12/2019 3:08 PM
12	Intern	6/12/2019 2:25 PM
13	Intern	6/12/2019 1:00 PM
14	Data Analytics, risk management, etc.	6/12/2019 10:52 AM
15	Intern	6/12/2019 10:20 AM
16	College undergraduate	6/12/2019 10:01 AM
17	Intern	6/12/2019 9:18 AM
18	Intern	6/12/2019 9:12 AM
19	Intern	6/12/2019 9:09 AM
20	Coop	6/12/2019 7:39 AM
21	co-op	6/11/2019 4:57 PM
22	undergraduate	6/11/2019 4:49 PM
23	Intern	6/11/2019 4:48 PM
24	Exploration (College Student / Intern)	6/11/2019 4:36 PM
25	Co-op	6/11/2019 4:32 PM
26	Intern - Grad Student	6/11/2019 4:21 PM
27	Undergrad Intern	6/11/2019 3:45 PM
28	Co-op/Student	6/11/2019 3:18 PM
29	Undergraduate student	6/11/2019 3:16 PM
30	Undergraduate intern	6/11/2019 3:16 PM
31	Senior Undergraduate - looking to go into Industry R&D	6/11/2019 3:15 PM
32	Co-op/Student	6/11/2019 3:05 PM
33	Still in graduate school	6/11/2019 2:58 PM
34	Intern	6/11/2019 2:57 PM
35	Intern	6/11/2019 2:56 PM

## Python/R Pre-Workshop Survey

36	Fourth-year PhD student	6/11/2019 2:56 PM
37	PhD intern	6/11/2019 2:50 PM
38	Student	6/11/2019 2:50 PM
39	Intern	6/11/2019 2:49 PM
40	Finished Bachelor's, accepted candidate for PhD	6/11/2019 2:49 PM
41	Undergraduate	6/11/2019 2:41 PM
42	Exploration/Establishment	6/11/2019 2:38 PM
43	Undergrad	6/11/2019 2:32 PM
44	PMPD Analytics	6/11/2019 2:28 PM
45	Intern	6/11/2019 2:26 PM
46	Master's	6/11/2019 2:25 PM
47	Undergraduate	6/11/2019 2:25 PM
48	Looking at grad schools	6/11/2019 2:25 PM
49	Student graduating Spring of 2020	6/11/2019 2:21 PM
50	College graduate about to go to graduate school in the fall	6/11/2019 2:19 PM
51	co-op	6/11/2019 2:19 PM
52	College Student- intern	6/11/2019 2:18 PM
53	Undergraduate student (rising senior)	6/11/2019 2:15 PM
54	Student/Co-op	6/11/2019 2:15 PM
55	Incoming PhD student	6/11/2019 2:15 PM
56	Intern	6/11/2019 2:14 PM

## Q3 What best described your discipline?

Answered: 56 Skipped: 0



ANSWER CHOICES	RESPONSES	
Life science (biology, genetics, immunology, etc.)	42.86%	24
Life science (ecology, zoology, botany)	0.00%	0
Chemistry, Earth sciences (geology, oceanography, meteorology)	5.36%	3
GIS, public health	3.57%	2
Microbiology	1.79%	1
Other	46.43%	26
TOTAL		56

## Q4 In three sentences or less, please describe your current field of work or your research question.

Answered: 54 Skipped: 2

#	RESPONSES	DATE
1	chemical engineering	6/14/2019 9:03 AM
2	Preclinical manufacturing and process development	6/13/2019 10:42 AM
3	Proteomics data analysis	6/13/2019 9:18 AM
4	At Regeneron as an intern, I am working in the Cardiovascular group with pulmonary fibrosis human cells.	6/13/2019 8:49 AM
5	IT: Interests include Programming, Security, Linux, Python and GIS	6/13/2019 8:48 AM
6	I'm an Industrial Engineering graduate Student. I am currently interning in the Continuous Department and would like to learn R for a Machine Learning Project!	6/13/2019 8:37 AM
7	chemical engineering	6/13/2019 8:30 AM
8	Developing media formulations that best promote antibody production and quality for different platforms.	6/12/2019 5:04 PM
9	Pharma	6/12/2019 3:49 PM
10	Creating/improving a new PLA method to detect interacting protein.	6/12/2019 3:23 PM
11	Currently none	6/12/2019 3:08 PM
12	Analytical chemistry	6/12/2019 2:25 PM
13	Determining associations between genetic variants and cognitive traits	6/12/2019 1:00 PM
14	I am working in the strategic sourcing & procurement department doing category market research and data analytics.	6/12/2019 10:52 AM
15	Investigating the relationship between GPR112 and IBD.	6/12/2019 10:20 AM
16	Working in the RGC in Mendelian Genetics. My tasks revolve around family-based exome analyses of certain disease cohorts. Part of this requires some coding skill to prepare/edit large files.	6/12/2019 10:01 AM
17	Field of Work: Mechanical Engineering	6/12/2019 9:18 AM
18	I am working in bioinformatics, specifically molecular profiling. I am adding additional functionality to the current RNA-Seq pipeline used by Regeneron molecular profiling	6/12/2019 9:12 AM
19	I am currently an undergraduate, who is majoring in physics and minoring in computer science. I am interning in the DNA Core, where I am using Python to edit the data output of the txt files produced by the 12K PCR. I heard that R is a great program for data analysis, so I want to learn more about it an how I can utilize R in my current field.	6/12/2019 9:09 AM
20	Biochemical engineer working on process development for purification of drug proteins.	6/12/2019 7:39 AM
21	Lab organization.	6/11/2019 4:49 PM
22	IT Business Relations Management and Audit	6/11/2019 4:48 PM
23	Pursuing a biomedical engineering bachelor's degree. Currently an intern in protein expression sciences focused on antibodies. Aspiring to research antibodies, drug delivery or pharmaceutical drugs.	6/11/2019 4:36 PM
24	Medical Image Processing, Imaging and diagnostics	6/11/2019 4:21 PM
25	Building a model to translate mouse expression experiment to human condition	6/11/2019 3:45 PM
26	biochemical engineering, optimization of cell culture metabolism	6/11/2019 3:18 PM

## Python/R Pre-Workshop Survey

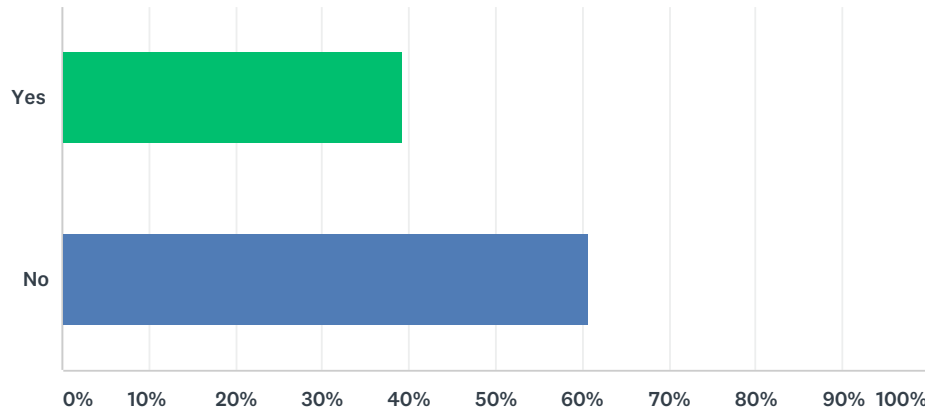
27	I am interning with the Pre-Therapeutic Target Discovery team. My project contributes to the expansion of the serum chemistry panel used in phenotyping genetic KO mice. Through comparison of hematology and serum chem data between a well-understood and previously phenotyped KO model (ob/ob mice, commonly utilized in metabolism studies) and WT control, I will contribute to the establishment of a historical dataset to which these new endpoints in future KO mice can be compared.	6/11/2019 3:16 PM
28	I am working in the cardiovascular disease group to identify potential targets in the coagulation/fibrinolytic pathways for treating thrombosis. During the school year I work in a skin bank on projects integrating oncology and dermatology/wound repair.	6/11/2019 3:16 PM
29	Bioengineering - Evaluating new fluorophores to aid in more complex cell population isolation via flow cytometry	6/11/2019 3:15 PM
30	I'm a Biomedical Engineering student, with a focus on tissue engineering and bioprocess engineering. I am helping determine the final process set points for drug production.	6/11/2019 3:05 PM
31	I am currently working in protein purification.	6/11/2019 2:58 PM
32	I am an intern in the Ophthalmology department. I have been running mainly immunohistochemistry experiments in the past years, but this year, I am also running experiments dealing with data analysis such as qPCR.	6/11/2019 2:57 PM
33	I'm an undergraduate at Georgetown University.	6/11/2019 2:56 PM
34	Nanomedicine	6/11/2019 2:56 PM
35	analytical method development for antibody drug conjugates (ADCs)	6/11/2019 2:50 PM
36	I am studying biomedical engineering. I have a focus in medical imaging, medical software design, and medical device design.	6/11/2019 2:50 PM
37	We wish to analyze the subcellular changes that occur to neurons before and after hydrogen peroxide injury modeling a component of traumatic brain injury. Moreover, we would also like to quantify these changes involving injury and treatment.	6/11/2019 2:49 PM
38	For PhD: The study of viral evolution and understanding the interplay between the immune system and viral emergence or re-emergence. For Regeneron: Understanding the mechanism behind oncolytic viral therapy and the cross-talk between the viral infection, tumor microenvironment, and innate immune system.	6/11/2019 2:49 PM
39	I currently work in the cardiovascular and renal diseases department at Regeneron, where I study fibroblast activation mechanisms post-myocardial infarction in an attempt to understand, isolate, and develop therapeutic agents to treat and prevent heart disease.	6/11/2019 2:41 PM
40	I am a Chemical Engineer that is currently helping my team improve their knowledge management and have made it my personal goal to help automate as much data scraping, data comparison, among other task to help improve team efficiency.	6/11/2019 2:38 PM
41	Biomedical engineering	6/11/2019 2:32 PM
42	I work on quantifying Amino Acid concentration and protein titer for the sake of providing data to the people that provide me samples. I also do tech development work for assay development.	6/11/2019 2:28 PM
43	For my internship I am working on developing dashboards to display data dynamically using scripting through a downloaded software platform.	6/11/2019 2:26 PM
44	Investigate combinations of blocking antibodies targeting CD47, MHCI and SLAMF7 to increase phagocytosis of tumor cell lines by macrophage cells.	6/11/2019 2:25 PM
45	The histologic characterization of macrophages in lung fibrosis	6/11/2019 2:25 PM
46	Data management	6/11/2019 2:25 PM
47	data analysis, actuarial sciences, applied statistics	6/11/2019 2:21 PM
48	Looking at recent literature and determining viable drug targets in the context of dendritic cells	6/11/2019 2:19 PM
49	process development	6/11/2019 2:19 PM
50	As a intern I am working in the immuno-oncoloy field.	6/11/2019 2:18 PM
51	I am an intern in the Immun-Oncology department. My manager and I are looking into the different populations of MDSC's in blood, spleen, BM, and tumors.	6/11/2019 2:15 PM

## Python/R Pre-Workshop Survey

52	Engineering (Biomedical/Process)	6/11/2019 2:15 PM
53	Background is in bioengineering w/ neuroscience focus. Currently in neuroscience pre-therapeutic discovery, working on a project with molecular profiling to create an atlas of RNA-seq data from multiple studies in mouse brains	6/11/2019 2:15 PM
54	Developing immunoscreening assays	6/11/2019 2:14 PM

## Q5 Will you be attending the workshop with a group of colleagues, friends, or classmates?

Answered: 56 Skipped: 0

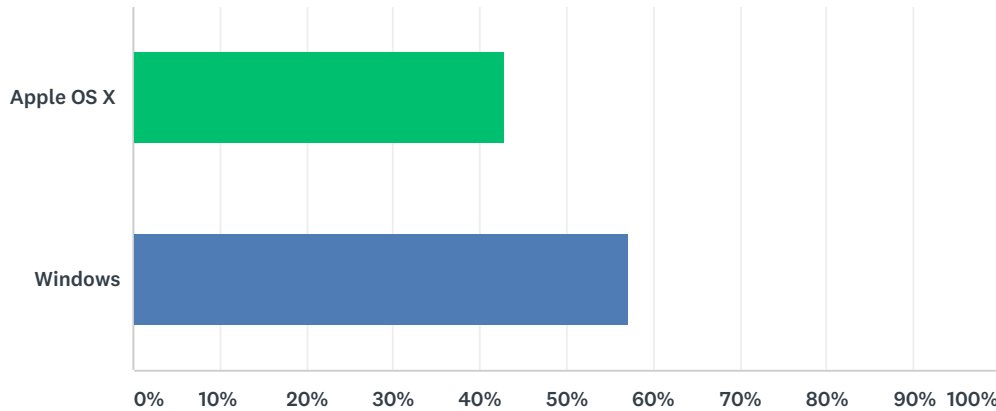


ANSWER CHOICES		RESPONSES	
Yes		39.29%	22
No		60.71%	34
TOTAL			56



## Q6 What OS will you use on the laptop you bring to the workshop (Note: only Mac or Windows laptops are supported)?

Answered: 56 Skipped: 0



ANSWER CHOICES	RESPONSES	
Apple OS X	42.86%	24
Windows	57.14%	32
TOTAL		56

## Q7 With which programming languages, if any, could you write a program from scratch which imports some data and calculates mean and standard deviation of that data?

Answered: 54    Skipped: 2

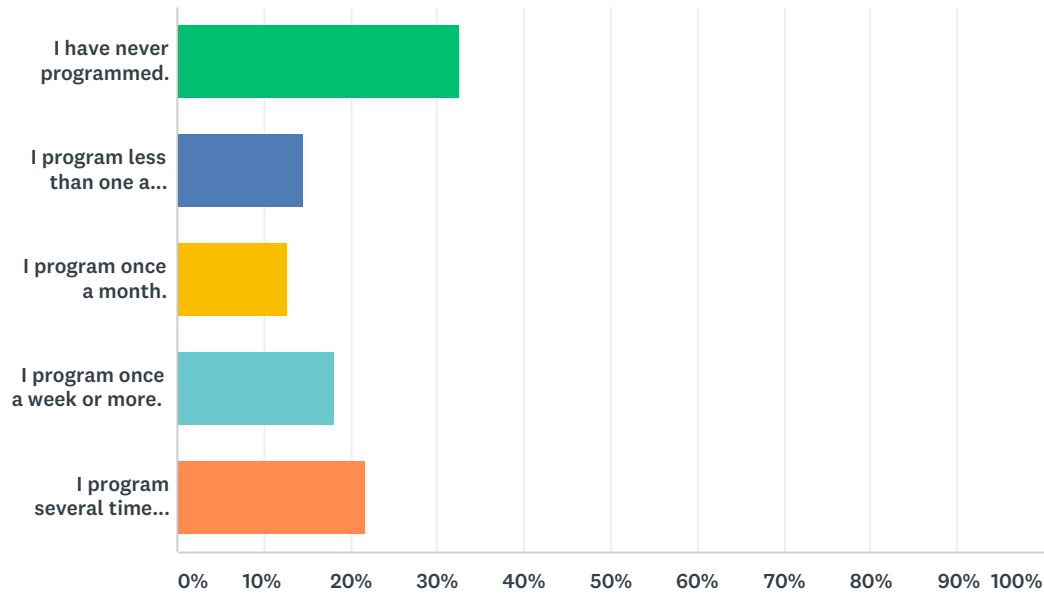
#	RESPONSES	DATE
1	matlab	6/14/2019 9:03 AM
2	C++, MATLAB	6/13/2019 10:42 AM
3	Python	6/13/2019 9:18 AM
4	none	6/13/2019 8:49 AM
5	I'm rusty right now, but I have done that in R previously. I could figure that out in Python or C++ pretty quickly I believe.	6/13/2019 8:48 AM
6	Python	6/13/2019 8:37 AM
7	matlab	6/13/2019 8:30 AM
8	VBA, MATLAB, C++	6/12/2019 5:04 PM
9	Matlab	6/12/2019 3:49 PM
10	No program	6/12/2019 3:23 PM
11	None	6/12/2019 3:08 PM
12	Excel	6/12/2019 2:25 PM
13	N/A	6/12/2019 1:00 PM
14	R studio	6/12/2019 10:52 AM
15	None	6/12/2019 10:20 AM
16	Python but would struggle through it	6/12/2019 10:01 AM
17	Python and C++	6/12/2019 9:18 AM
18	R, SAS	6/12/2019 9:12 AM
19	Java, Python, C++	6/12/2019 9:09 AM
20	Matlab	6/12/2019 7:39 AM
21	Python, MATLAB, JSL	6/11/2019 4:57 PM
22	java, c++	6/11/2019 4:49 PM
23	None	6/11/2019 4:48 PM
24	Maybe Excel within Microsoft office.	6/11/2019 4:36 PM
25	Python, Matlab	6/11/2019 4:21 PM
26	python	6/11/2019 3:45 PM
27	excel, matlab	6/11/2019 3:18 PM
28	None, I am a beginner programmer.	6/11/2019 3:16 PM
29	MATLAB	6/11/2019 3:16 PM
30	Java, Matlab	6/11/2019 3:15 PM
31	I could not, but I assume it would have to import selected data, input it into a matrix or table in which it could be counted, then use a function (sum/n) or avg(input) for mean and standard deviation. It would also need a defined output (let A = avg(x), let SD = stddev(x), etc.).	6/11/2019 3:05 PM

## Python/R Pre-Workshop Survey

32	Java JSL	6/11/2019 2:58 PM
33	None	6/11/2019 2:57 PM
34	None	6/11/2019 2:56 PM
35	R, Matlab	6/11/2019 2:50 PM
36	Python, Matlab	6/11/2019 2:50 PM
37	Java, Visual Basic, Matlab	6/11/2019 2:49 PM
38	None	6/11/2019 2:49 PM
39	MATLAB	6/11/2019 2:41 PM
40	Maybe C++	6/11/2019 2:38 PM
41	Matlab, C++	6/11/2019 2:32 PM
42	Java, C++, Matlab, JMP	6/11/2019 2:28 PM
43	Java	6/11/2019 2:26 PM
44	Yes, Matlab	6/11/2019 2:25 PM
45	N/A	6/11/2019 2:25 PM
46	R, Python, MATLAB, VBA	6/11/2019 2:25 PM
47	vba, sql, r, python, C#, html	6/11/2019 2:21 PM
48	None :(	6/11/2019 2:19 PM
49	c, c++	6/11/2019 2:19 PM
50	No	6/11/2019 2:18 PM
51	none	6/11/2019 2:15 PM
52	MATLAB, LabView, Python	6/11/2019 2:15 PM
53	MATLAB, Python, R	6/11/2019 2:15 PM
54	R and Python	6/11/2019 2:14 PM

## Q8 What best describes how often you currently program?

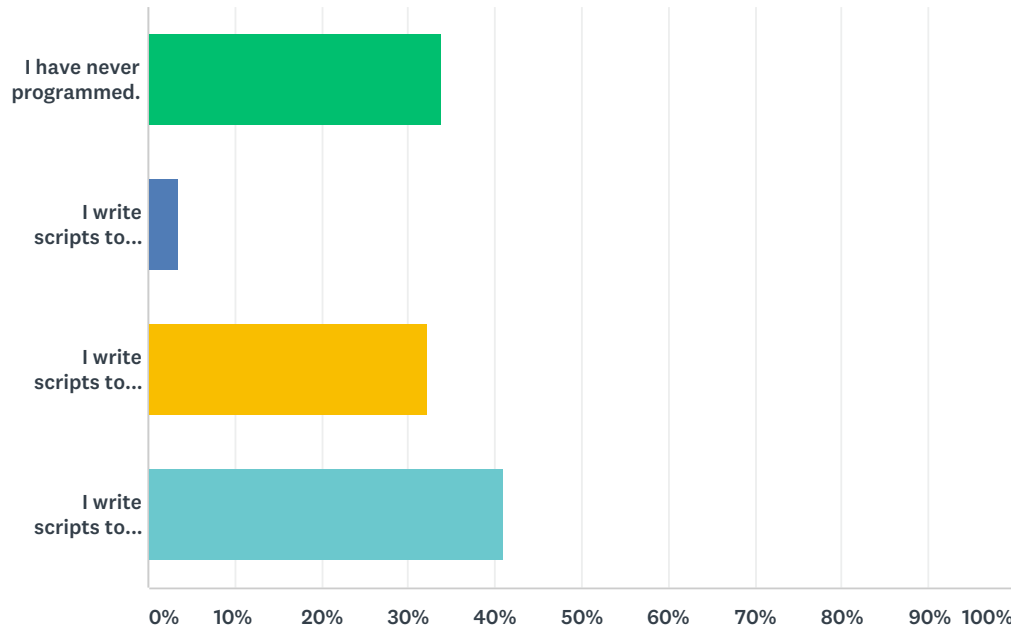
Answered: 55 Skipped: 1



ANSWER CHOICES	RESPONSES	
I have never programmed.	32.73%	18
I program less than one a year.	14.55%	8
I program once a month.	12.73%	7
I program once a week or more.	18.18%	10
I program several times a year.	21.82%	12
TOTAL		55

## Q9 What best describes the complexity of your programming? (Choose all that apply.)

Answered: 56 Skipped: 0



ANSWER CHOICES	RESPONSES	
I have never programmed.	33.93%	19
I write scripts to analyze data., I write tools to use and that others can use., I am part of a team which develops software.	3.57%	2
I write scripts to analyze data., I write tools to use and that others can use.	32.14%	18
I write scripts to analyze data.	41.07%	23
Total Respondents: 56		

# Q10 In three sentences or fewer, describe a common scenario in your daily work in which stronger computing skills would improve your workflow and make you more productive.

Answered: 51    Skipped: 5

#	RESPONSES	DATE
1	Enhance computing ability for data analysis	6/13/2019 10:42 AM
2	Automating data analysis	6/13/2019 9:18 AM
3	I don't know	6/13/2019 8:49 AM
4	Time Management Specific Python Concepts: Functions and using Return, using classes and global. My form is currently unorthodox.	6/13/2019 8:48 AM
5	In order to implement Machine Learning in Preventive Maintenance and Corrective Maintenance.	6/13/2019 8:37 AM
6	I am working with matlab to create a code that automates the HIC load adjustment in the process lab, and python would help me to review and my coding skills and learn other languages to help me with the logic and writing code	6/13/2019 8:30 AM
7	Developing tools that incorporate predictive modeling related to cell growth, consumption, and production.	6/12/2019 5:04 PM
8	Analysis of longterm data variation trends	6/12/2019 3:49 PM
9	I use many programs on my computer, however sometimes I found out a tedious problem that I wish the program I am currently using streamlines it. Instead of waiting for the next update, I want to make my own add-on or modifications to it.	6/12/2019 3:23 PM
10	Having strong Computing skills will be beneficial to me in the near future.	6/12/2019 3:08 PM
11	It would help to make data analysis more efficient and less time consuming.	6/12/2019 2:25 PM
12	Wanting to sort data by specific parameters	6/12/2019 1:00 PM
13	I am currently working on a category project for Global Clinical Development and having stronger computing skills would help convey my ideas better to my team.	6/12/2019 10:52 AM
14	As I begin college I hope to learn programming in order to support further work in fields involving data analytics and computer science.	6/12/2019 10:20 AM
15	As mentioned, my work requires analysis of large files. I recently finished a script in perl that extracted useful data from a 60,000 line file and printed it out to another file in a proper format. Getting more skilled at writing basic scripts would be helpful.	6/12/2019 10:01 AM
16	Computing skills would allow me to take on more tasks that I am currently not ready to complete.	6/12/2019 9:18 AM
17	Give with more familiarity with the built-in functions of R as well as learn how to use Shiny to allow my package/code to be available in a user-friendly interactive format	6/12/2019 9:12 AM
18	Sometimes I find myself writing a complicated program to solve a simple problem, so with stronger computer skills, I am hoping to increase the efficiency of my code.	6/12/2019 9:09 AM
19	Large and complex data sets that need analyzing are encountered very often; a basic understanding of various coding languages would help me to reach my goals faster and more efficiently.	6/12/2019 7:39 AM
20	NA	6/11/2019 4:49 PM
21	I can improve my productivity greatly if I have a better grasp of the technology I am using.	6/11/2019 4:48 PM
22	In many STEM fields today, being able to program gives an applicant a valuable advantage. I am trying to see if coding in python interests me and is a code I would pursue further.	6/11/2019 4:36 PM

## Python/R Pre-Workshop Survey

23	Since, images are a source of large quantities of information, it can prove tedious and time restricting to manually detect patterns or identify abnormalities within a dataset. Applying programing allows me to transfer the problem to the computer.	6/11/2019 4:21 PM
24	familiarity with large dataset manipulations	6/11/2019 3:45 PM
25	understanding modeling, being able to learn how to code in multiple languages, workflow of tackling new scripts/new languages	6/11/2019 3:18 PM
26	I will be collecting hematology and serum chemistry data multiple times a week over a 6 week project. Stronger computing skills will optimize the data analysis process throughout the duration of the project. I am looking for additional applications within the PTTD group and daily work of my manager to improve his workflow, as well, beyond the duration of this internship.	6/11/2019 3:16 PM
27	As an engineering student, I often am working on experiments that could benefit from creating a program for human participants to interact with. I could also use these skills to create projects related to my degree/interests.	6/11/2019 3:16 PM
28	Automated gating strategies for fluorescence plots	6/11/2019 3:15 PM
29	I want to create useful scripts to make data analysis quicker, and I also want to help streamline daily tasks that involve creating logs of data.	6/11/2019 3:05 PM
30	Stronger programming skills would allow me to analyze data faster and make me more productive.	6/11/2019 2:58 PM
31	Understanding the mechanisms that produce my data when I run data analysis experiments would definitely help me better understand what I am looking at. I do not have any background in computer science, but I know it will help me during my internship as well as my college career.	6/11/2019 2:57 PM
32	If I need Python	6/11/2019 2:56 PM
33	Analyze multiple datasets for quantification purposes efficiently.	6/11/2019 2:50 PM
34	It is helpful for image processing and result analysis.	6/11/2019 2:50 PM
35	Transferring data between plate reader software and data analysis software requires the use of excel in the middle. It would be easier to transfer directly using code.	6/11/2019 2:49 PM
36	Being able to analyze my data myself would improve my understanding of my work and also would allow me to better tailor my experiments	6/11/2019 2:49 PM
37	I can develop some scripts and programs that may save me a lot of time by down-sizing my workload.	6/11/2019 2:41 PM
38	I had to write an Excel VBA for comparing data and finding matches which I create from scratch but it took over a week. More programming education could help my logical thinking and expand my abilities.	6/11/2019 2:38 PM
39	N/a	6/11/2019 2:32 PM
40	Statistical analysis for a recent experiment where I have several conditions to look at.	6/11/2019 2:28 PM
41	In developing the dashboards I do a lot of scripting to pull in and manipulate data so having more knowledge on scripting languages will help. Also when I code on my own, python is a language I haven't learned so that will be helpful.	6/11/2019 2:26 PM
42	I have a common data input format and I always usually do the same analysis on it. Then transfer the data to Prism to make graphs. If I could program this and make it more effective it would save me time.	6/11/2019 2:25 PM
43	The general use of computers everyday both inside and outside the lab setting	6/11/2019 2:25 PM
44	Trying to understand data flow from machine to server to user.	6/11/2019 2:25 PM
45	I code everyday	6/11/2019 2:21 PM
46	Between the amount of databases and statistical analysis I come across in research, being able to understand computer programming would save a lot of time and energy	6/11/2019 2:19 PM
47	As, a researcher and student it will help me better understand how to work different programs in labs and be more experienced.	6/11/2019 2:18 PM
48	Analyzing large amounts of data on Flowjo.	6/11/2019 2:15 PM

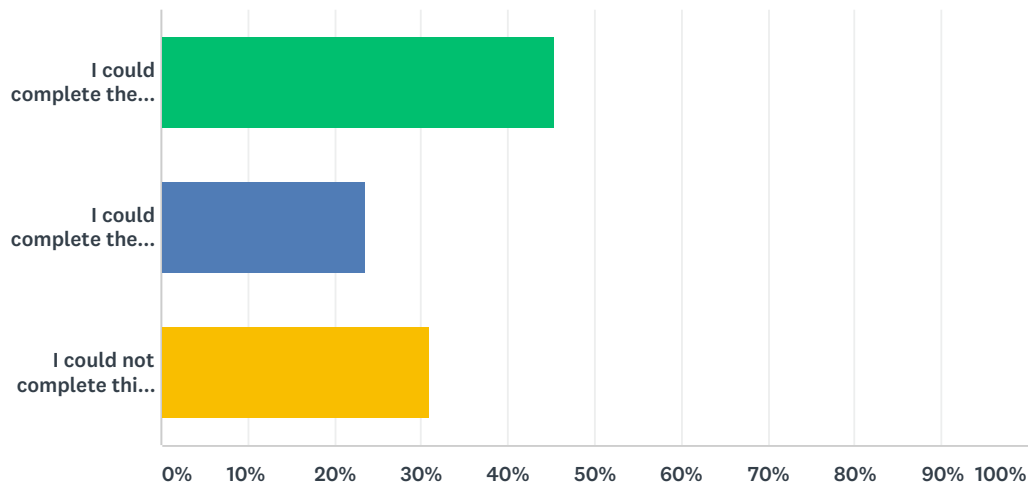
## Python/R Pre-Workshop Survey

49	Consumption trends are difficult to calculate, requiring navigation between multiple spreadsheets with time intensive manipulation of data. Automation would save time and frustration.	6/11/2019 2:15 PM
50	writing scripts to analyze/manipulate large datasets in Python, copying/moving files in the terminal	6/11/2019 2:15 PM
51	Being able to read in my data and analyze it quantitatively faster than through excel would be helpful	6/11/2019 2:14 PM



Q11 A tab-delimited file has two columns showing the date and the highest temperature on that day. Write a program to produce a graph showing the average highest temperature for each month.

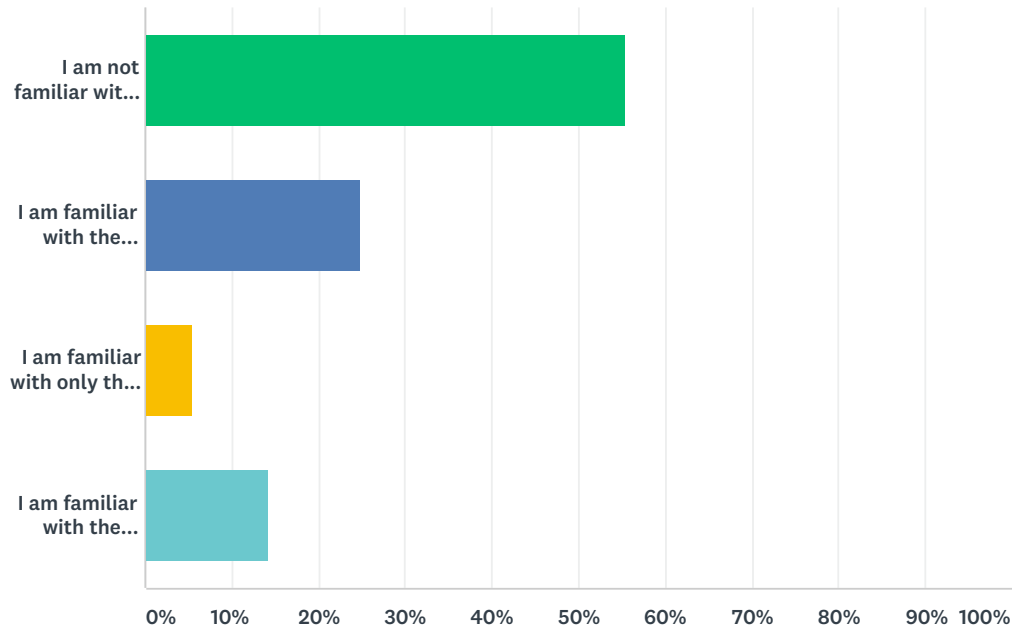
Answered: 55   Skipped: 1



ANSWER CHOICES		RESPONSES	
I could complete the task with documentation or search engine help.		45.45%	25
I could complete the task with little or no documentation or search engine help.		23.64%	13
I could not complete this task.		30.91%	17
TOTAL			55

## Q12 How familiar do you think you are with the unix/linux command line?

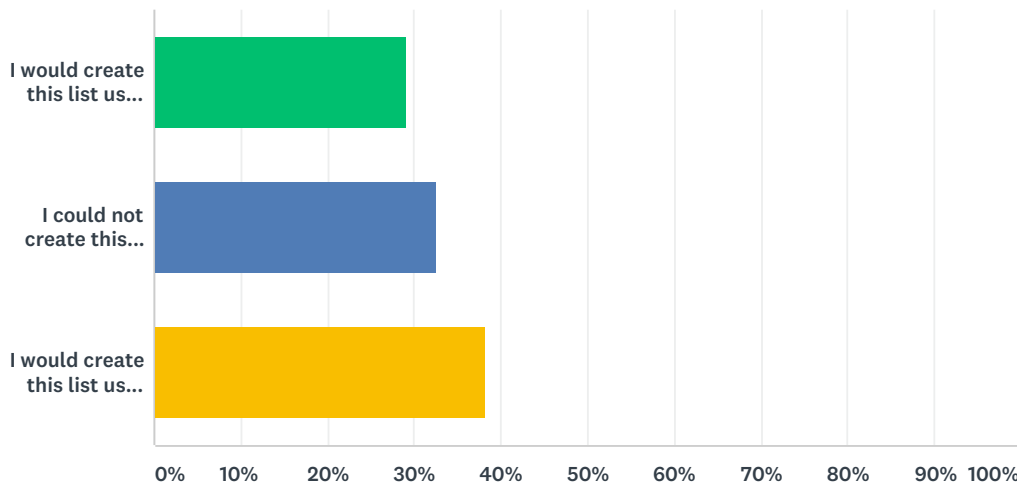
Answered: 56 Skipped: 0



ANSWER CHOICES	RESPONSES	
I am not familiar with the command line.	55.36%	31
I am familiar with the command line because I have or am using it.	25.00%	14
I am familiar with only the term "command line."	5.36%	3
I am familiar with the command line but have never used it.	14.29%	8
TOTAL		56

Q13 How would you solve this problem: A directory contains 1000 text files. Create a list of all files that contain the word "Drosophila" and save the result to a file called results.txt.

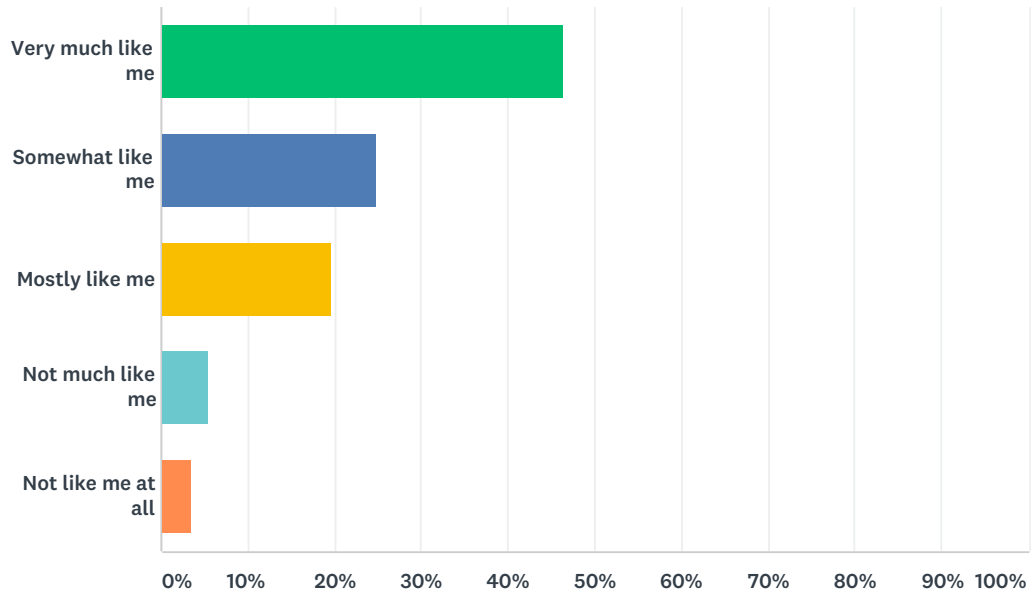
Answered: 55 Skipped: 1



ANSWER CHOICES	RESPONSES	
I would create this list using basic command line programs.	29.09%	16
I could not create this list.	32.73%	18
I would create this list using "Find in Files" and "copy and paste."	38.18%	21
TOTAL		55

# Q14 Consider the extent to which the following statement applies to you: "Setbacks don't discourage me."

Answered: 56 Skipped: 0



ANSWER CHOICES		RESPONSES	
Very much like me		46.43%	26
Somewhat like me		25.00%	14
Mostly like me		19.64%	11
Not much like me		5.36%	3
Not like me at all		3.57%	2
TOTAL			56