



SURVEY SAMPLING&PRE TEST



PROGRAMMING LANGUAGE PREFERENCES AMONG
DATA SCIENCE STUDENTS:
PYTHON, R, AND JAVA

FACULTY OF COMPUTER AND DATA SCIENCE

TEAM 11

**SURVEY
METHODOLOGY**

Dr. Ebrahim Galal

SUPERVISOR

Eng. Passant Hamza





SAMPLING



- In this survey, the population is the students of the general department in the college (Data Science) from the first level to the fourth level, whose ages range from approximately 18-23 years, and their location is the College of Computers of Alexandria.
- The survey will be sent to 600 students of different levels and ages.
- We reach our sample through the Google form and some WhatsApp questions, because this is the easiest way to communicate with people.
- As for the sample size, it is approximately 1000 people, but we will suffice with about 250 people in order to ensure a normal distribution of data.

Recruitment:

- Sample will be recruited through various channels, including email, online communities, social media, face-to-face interactions. With a Thanks card to encourage participation.

Survey Method:

- We used the Stratified sampling method to divide the population, which is that we took simple random samples from each level in data science department.



SAMPLING OF PRE TEST



- We choose the people who enrolled in survey course so that their opinion is more specific than others in the college and their opinion is benefited from.
- We choose about 5% of the whole population to be the sample, and their number is approximately 20 people who contributed to giving feedbacks to improve the level of our questionnaire.

- We did a pre test in the form of a Google form, and we sent it to the sample, and we got good impressions from them that helped us improve the form and level of the questions in the questionnaire.



Questionnaire-Python ,R and Java

- This form is for pre test to improve the level of questions in our survey
- This survey aims to determine the preferred programming language among computer and data science students. The survey will gather information on participants' experience with each language, as well as the factors that influence their choice , and your answers will be used for research purposes only please answer all questions truthfully and to the best of your ability
- ?Please,calculate How long did it take to fill this form
- Check if this form covered a good topics about the survey
- Don't forget to write your feedback at the end of this form



PRE TEST

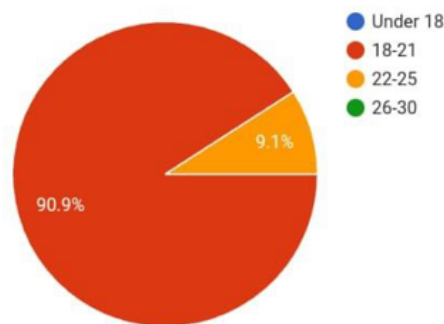


First, in this question:

What is your age?

- Under 18
- 18-21
- 22-25
- 26-30

We found that most of the answers were choice 18-21, so we made the choices more specific.



We've changed the format of the answers to...

*?What is your age

under18

19

20

21

22

23

over 23

We were alerted by this feedback:

Feedback !

سؤال العمر ملوش داعي يكون محصور في فترات
ممکن يبقي قيم معينة علي طول لان كذا كذا سن
الناس الي في الكلية محدد اوي



PRE TEST



In this question: Which of the following fields are you interested in?

- Mobile Applications
- Cyber Security
- AI
- Web Development
- Other

we changed the format of answers to be more generalized such that:

* ?Which of the following fields are you interested in

Mobile Applications ☐

Cyber Security ☐

AI ☐

Data science ☐

Web Development ☐

أخرى: ☐

In these questions, we found that the scale was small, so we made the range larger.

18. In your opinion, how important is it to know multiple programming languages for use in data science? (3 is the highest)

- 1
- 2
- 3

we changed it to:

In your opinion, how important is it to know multiple programming languages for *
use in data science?

1 2 3 4 5

Not important ☐ ☐ ☐ ☐ ☐ Very important



PRE TEST



In this question, the options were limited, so we added the option "other" to get people to write their own answers:

6. Which programming language(s) do you think are trend in the job market towards hiring professionals with skills?

- Java
- R
- Python

We changed the format to:

Which programming language(s) do you think are trend in the job market towards hiring professionals with skills?

- ☐ Java
- ☐ R
- ☐ Python
- ☐ Other: _____

We were alerted by this feedback:

Feedback !

ردان (2)

كل لغة ليها مجالها ،صعب اني اقول ان لغات معينة هي الي ليها شغل وبس

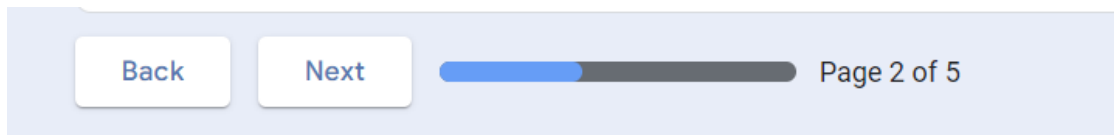
اضافة مساحة للكتابة عند other



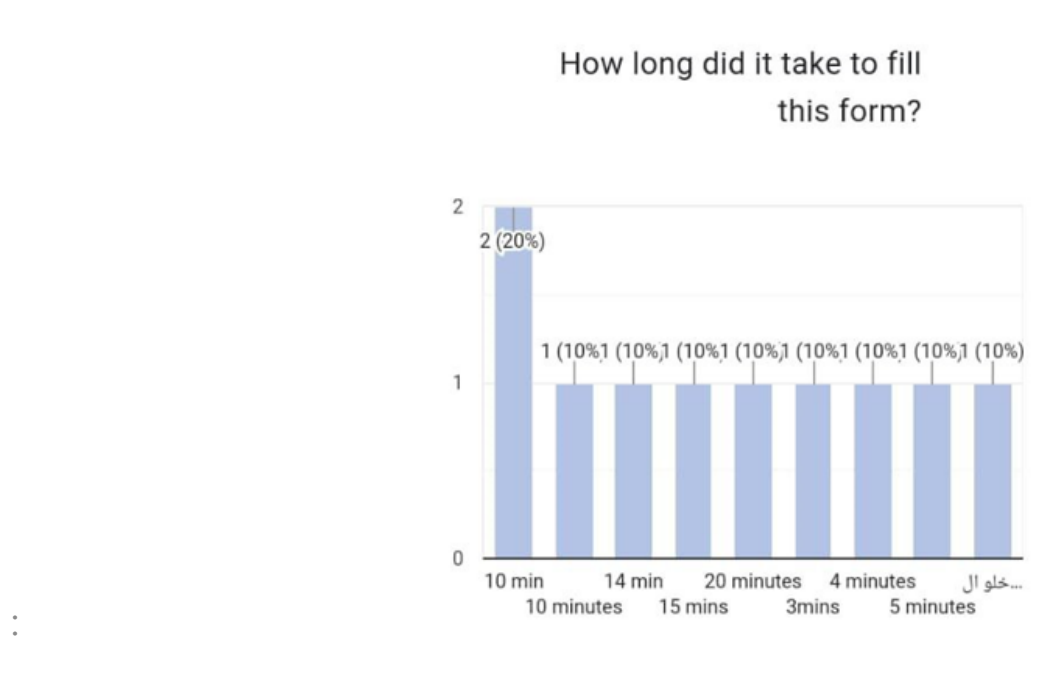
PRE TEST



In the beginning, the questions were written randomly and unordered, so we modified the design of the form so that it was divided into sections, each section linked to each other.



These are the answers to the question "How long did it take to fill out this form?"



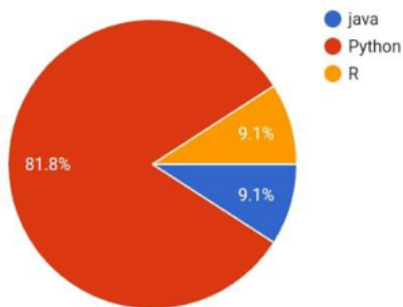


PRE TEST

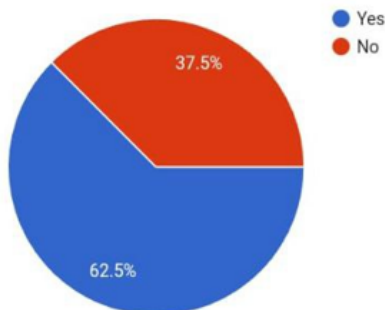


Answers about some questions:

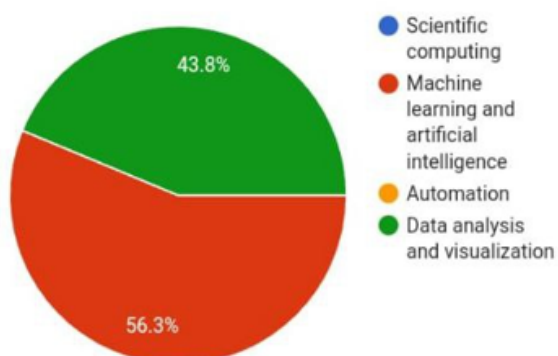
?which programming language helps you the most



22. Do you consider the current trends in industry and job markets when choosing a language for tasks?



. From your point of view, what specific task is typically performed using Python?





PRE TEST



عظمة علي عظمة ، احب اوجه الشكر لاختواتي
وحبايبي القائمين علي السرفاي السكره دا
ووضحت حوالي ١٠ تعديلات شايف انهم مهمين
السرفاي دا اخذ مني ١٣ دقيقة بظبط

You are doing great

good . the question not long and design
.of questions is easy to understand

!Perfect

It's good but has a lot questions about
my feedback we can reblace it with
three questions only

the question are lacking and repetitive
and hard actually to do analysis with,
data will not be normal and points does
not cover a lot of content and cover it
.poorly

*Thank
you*

