Example report on synthetic data

This report is generated based on a **synthetic** dataset representing responses to a survey to assess the current needs and use of statisticians and software engineers across the university. This dataset contains 27 responses.

FTE

FTE of Statistical Methodology

The following tables and barplots show the FTE needed and supported for statistical services, and are based on the two questions below:

Q3: Generally, what level of effort (in FTE or full time equivalent) would be needed to satisfy your research needs (across all of your projects) for the types of statistical methodology services described above?

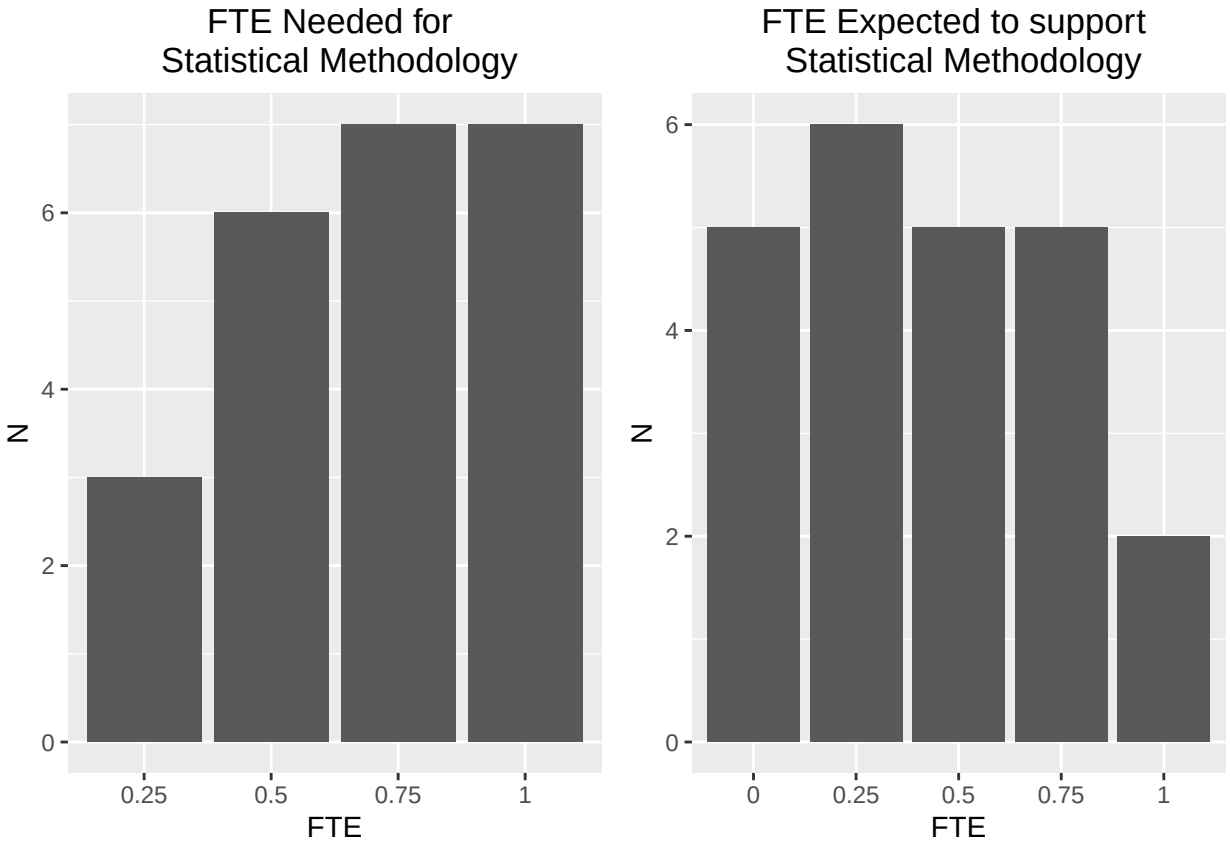
Q4: Generally, what level of effort (in FTE or full time equivalent) could you reasonably expect to support (across all of your projects) the statistical methodology services described above from your grants?

Table 1: FTE Needed for Statistical Methodology

FTE	N
0.25	3
0.5	6
0.75	7
1	7
Total:	16 FTE needed

Table 2: FTE Supported for Statistical Methodology

FTE	N
0	5
0.25	6
0.5	5
0.75	5
1	2
Total:	9.75 FTE supported



The following table shows the total of FTE needed and supported, their difference, and how much of the FTE needed has been supported.

Table 3: Gap Between Statistical FTE Needed and FTE Supported

FTE Needed	FTE Supported	Needs & Supports Gap	% of Needs Supported
16	9.75	6.25	60.9%

The following table and barplot show the difference between the FTE needed and the FTE expected to support (**Q3-Q4**).

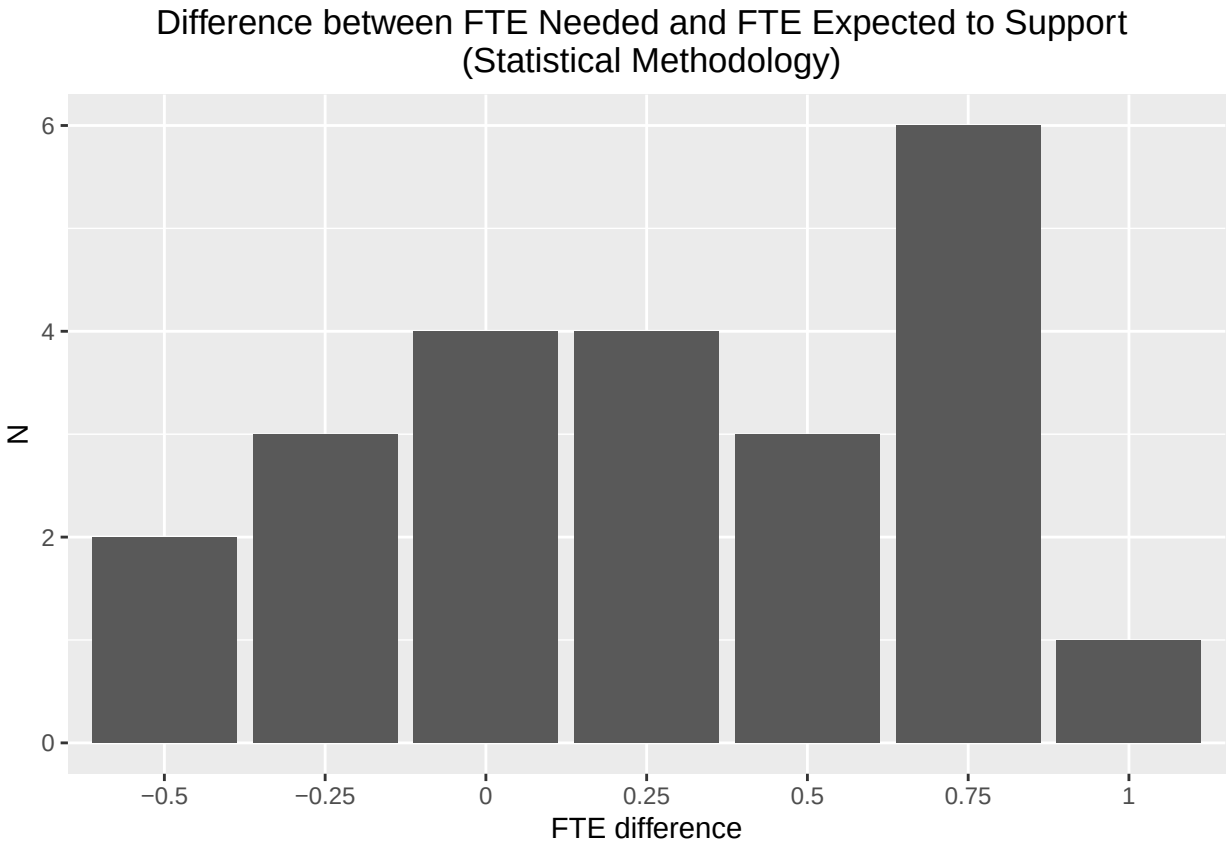
Table 4: Difference between FTE needed and FTE expected to support (Statistical Methodology)

FTE Needed - FTE Supported	N
-0.5	2
-0.25	3
0	4
0.25	4
0.5	3
0.75	6
1	1

Total: 6.25 FTE needed but not supported

Table 5: Summary Table of the FTE Difference (Statistical Methodology)

Mean	SD	Sum
0.272	0.445	6.25



FTE of Software Engineering

The following tables and barplots show the FTE needed and supported for software engineering services, and are based on the two questions below:

Q10: Generally, what level of effort (in FTE or full time equivalent) would be needed to satisfy your research needs (across all of your projects) for the types of software engineering services described above?

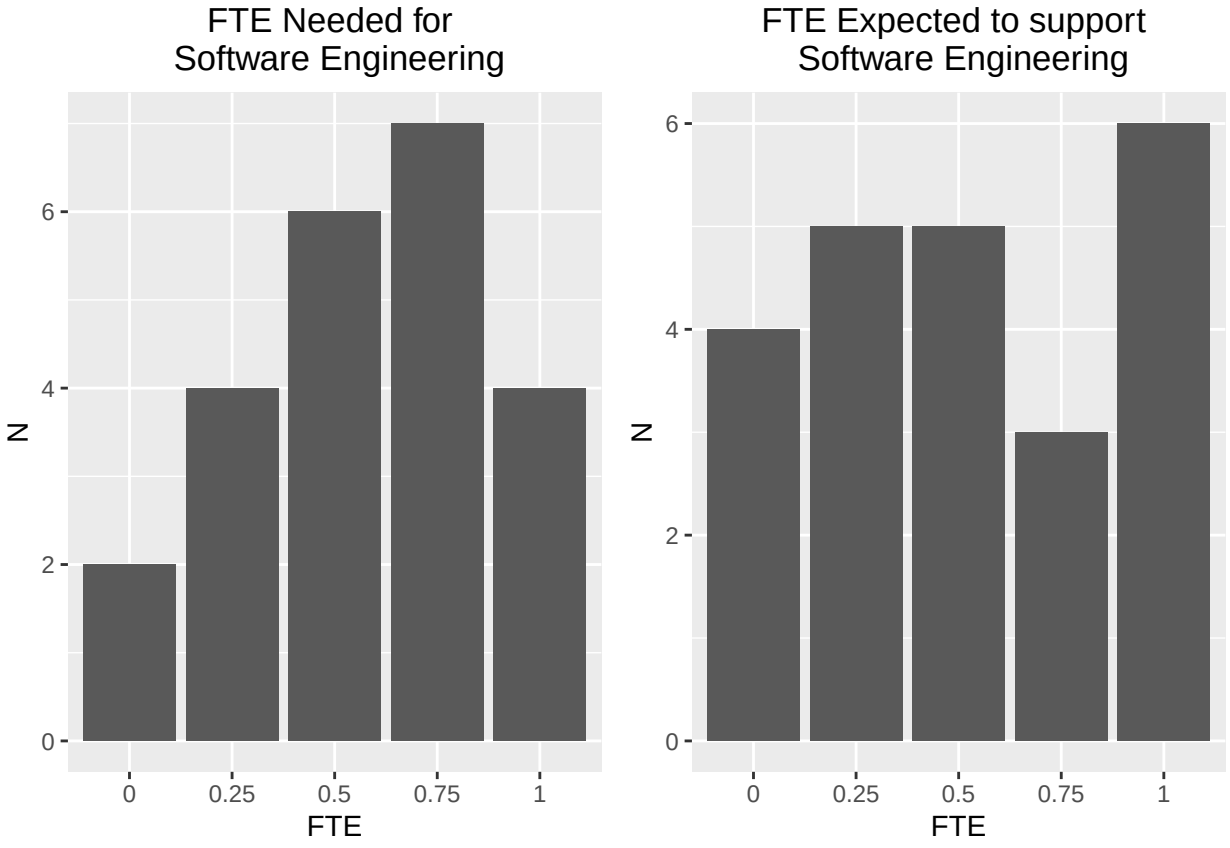
Q11: Generally, what level of effort (in FTE or full time equivalent) could you reasonably expect to support (across all of your projects) the software engineering services described above from your grants?

Table 6: FTE Needed for Software Engineering

FTE	N
0	2
0.25	4
0.5	6
0.75	7
1	4
Total:	13.25 FTE needed

Table 7: FTE Supported for Software Engineering

FTE	N
0	4
0.25	5
0.5	5
0.75	3
1	6
Total:	12 FTE supported



The following table shows the weighted total of FTE needed and supported, their difference, and how much of the FTE needed has been supported.

Table 8: Gap Between Software FTE Needed and FTE Supported

FTE Needed	FTE Supported	Needs & Supports Gap	% of Needs Supported
13.25	12	1.25	90.6%

The following table and barplot show the difference between the FTE needed and the FTE expected to support (**Q3-Q4**).

Table 9: Difference between FTE needed and FTE expected to support (Software Engineering)

FTE Needed - FTE Supported	N
-1	1
-0.75	1
-0.5	1
-0.25	7
0	1
0.25	5
0.5	5
0.75	2

Total: 1.25 FTE needed but not supported

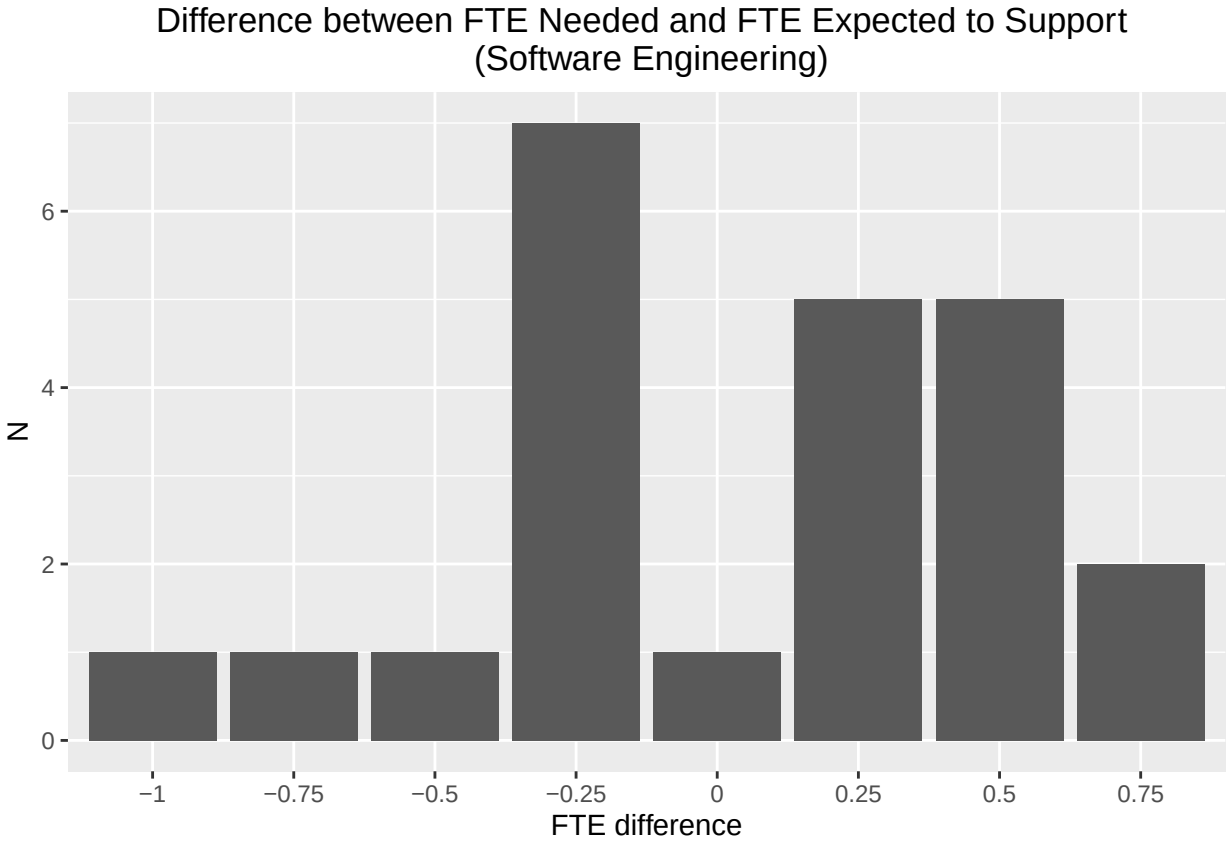


Table 10: Summary Table of the FTE Difference (Software Engineering)

Mean	SD	Sum
0.054	0.47	1.25

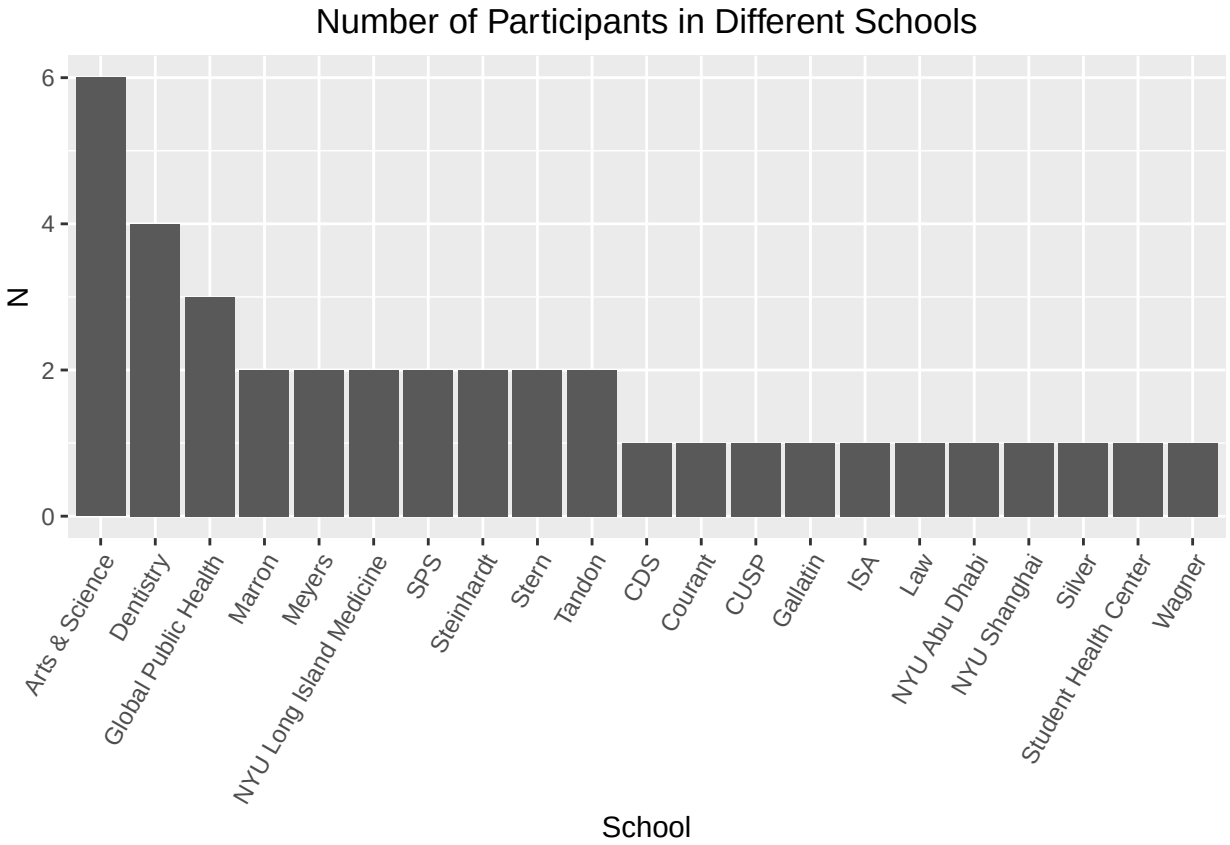
Demographics

School

Q1: Which NYU schools, centers, or institutes are you affiliated with?

Table 11: Number of Participants in Different Schools

School	N
Arts & Science	6
Dentistry	4
Global Public Health	3
Marron	2
Meyers	2
NYU Long Island Medicine	2
SPS	2
Steinhardt	2
Stern	2
Tandon	2
CDS	1
Courant	1
CUSP	1
Gallatin	1
ISA	1
Law	1
NYU Abu Dhabi	1
NYU Shanghai	1
Silver	1
Student Health Center	1
Wagner	1

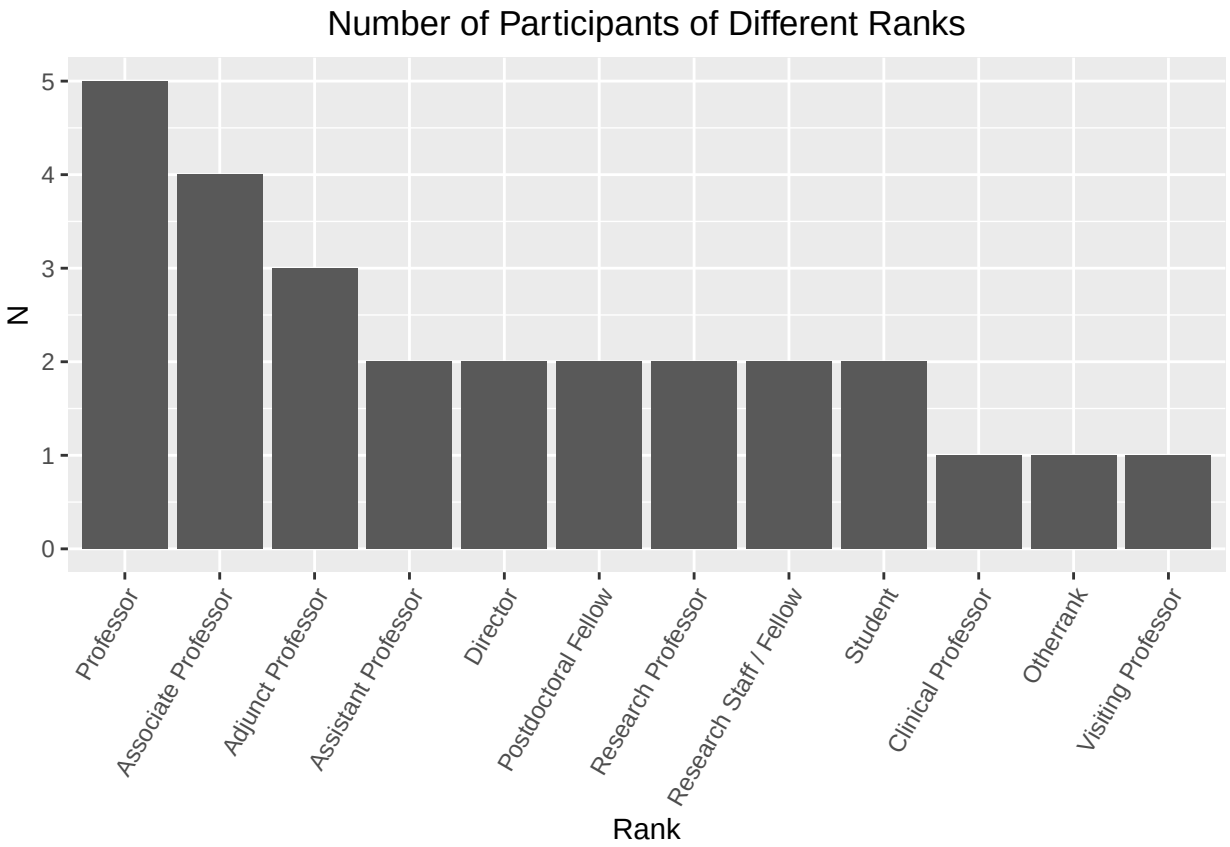


Rank

Q2: What is your current rank?

Table 12: Number of Participants of Different Ranks

Rank	N
Professor	5
Associate Professor	4
Adjunct Professor	3
Assistant Professor	2
Director	2
Postdoctoral Fellow	2
Research Professor	2
Research Staff / Fellow	2
Student	2
Clinical Professor	1
Otherrank	1
Visiting Professor	1



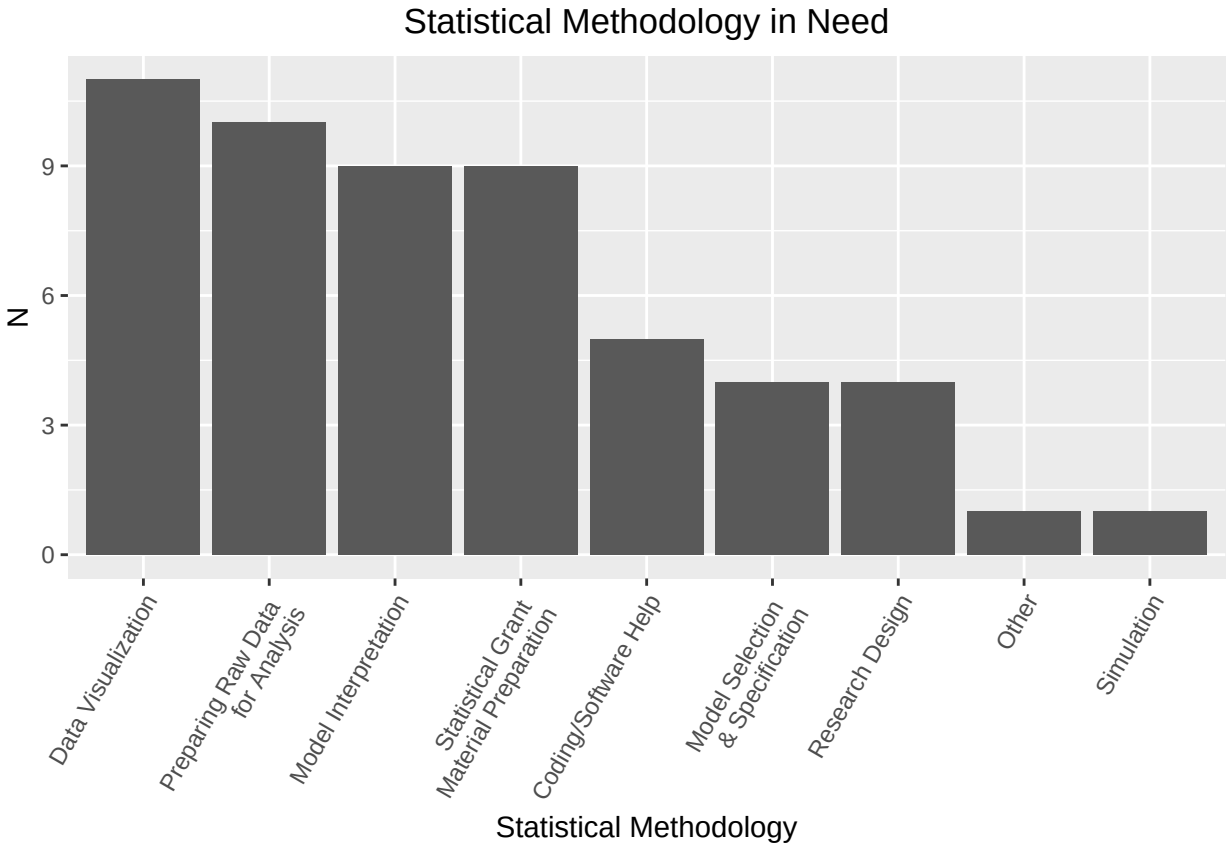
Statistical Methodology

Statistical Methodology checkbox

Q Checkbox: Which of the following Statistical Methodology do you currently use in your work, need help with, or expect that you may need help with in the future?

Table 13: Statistical Methodology in Need

Statistical Methodology	N
Data Visualization	11
Preparing The Raw Data For Analysis	10
Model Interpretation	9
Preparation Of Statistical Grant Materials	9
Coding/Software Help	5
Model Selection And Specification	4
Research Design	4
Other	1
Simulation	1



Subquestions for each of the statistical methodology

The following tables are showing the following four questions asking about each of the statistical methodology selected by the participant:

(1) How often do you currently need to perform these tasks in your research?

(2) To what extent do you think access to people who could help you with these tasks would help your research?

(3) How hard is it for you to currently support someone to help you with these tasks through your grants?

(4) How hard is it for you to currently find people to help you with these tasks?

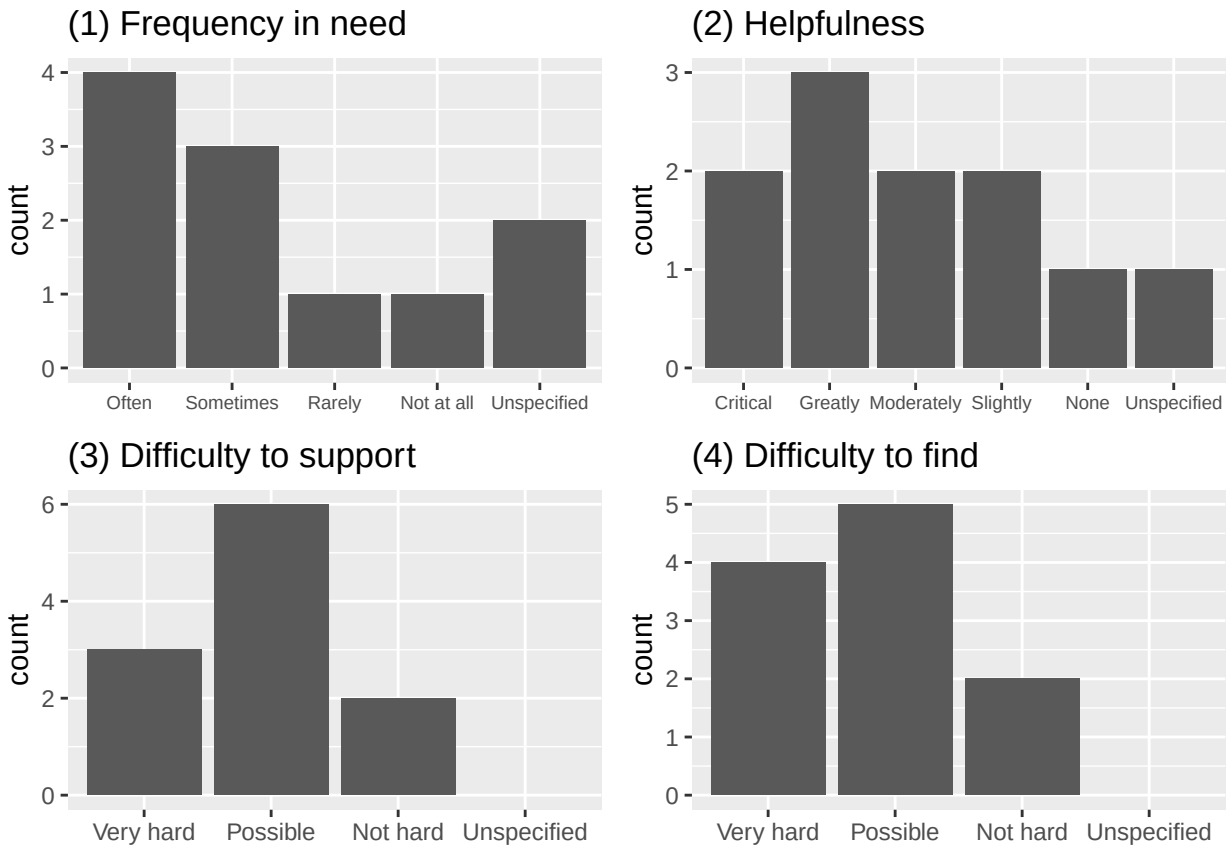
Data Visualization:

(1) Frequency in need	N
Often	4
Sometimes	3
Rarely	1
Not at all	1
Unspecified	2

(2) Helpfulness	N
Critical to research	2
Greatly help	3
Moderately help	2
Slightly help	2
Not at all	1
Unspecified	1

(3) Difficulty to support	N
Very hard	3
Possible	6
Not hard	2
Unspecified	0

(4) Difficulty to find	N
Very hard	4
Possible	5
Not hard	2
Unspecified	0



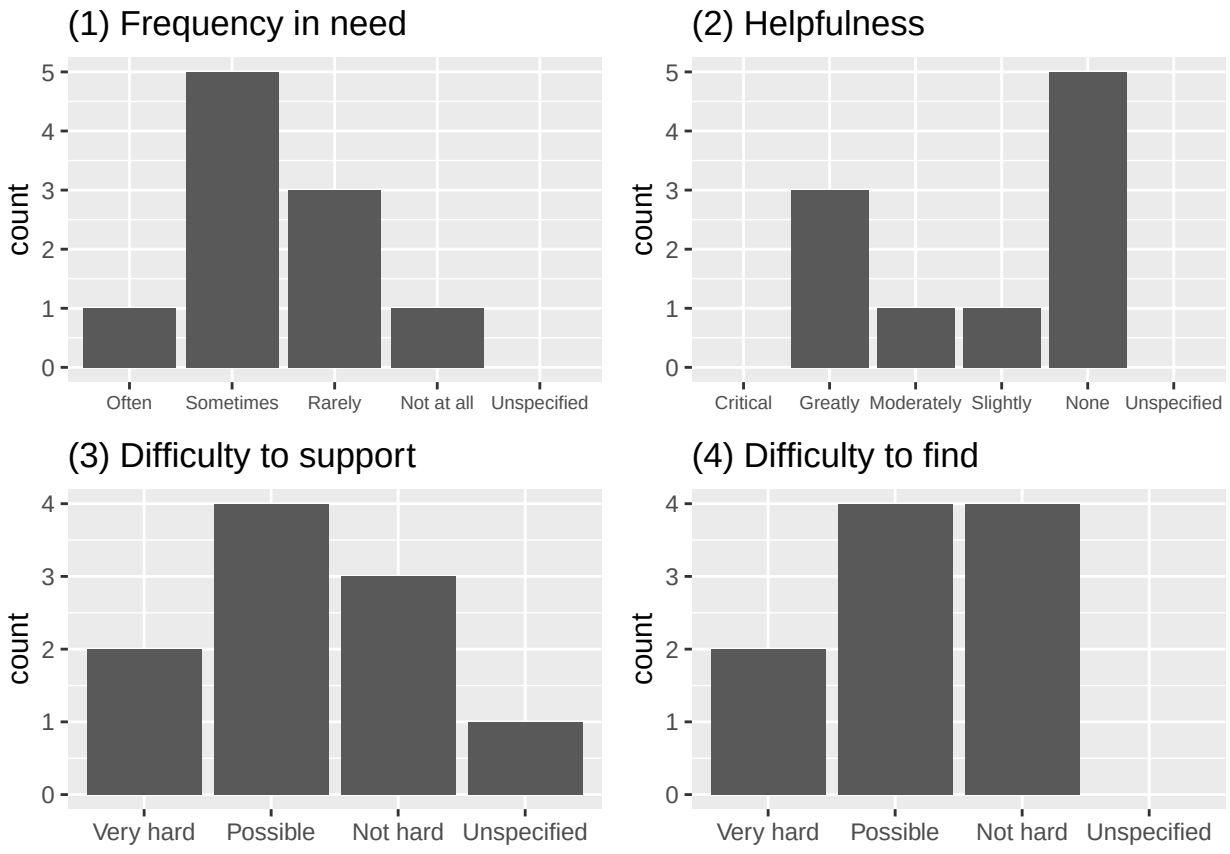
Preparing The Raw Data For Analysis:

(1) Frequency in need	N
Often	1
Sometimes	5
Rarely	3
Not at all	1
Unspecified	0

(2) Helpfulness	N
Critical to research	0
Greatly help	3
Moderately help	1
Slightly help	1
Not at all	5
Unspecified	0

(3) Difficulty to support	N
Very hard	2
Possible	4
Not hard	3
Unspecified	1

(4) Difficulty to find	N
Very hard	2
Possible	4
Not hard	4
Unspecified	0



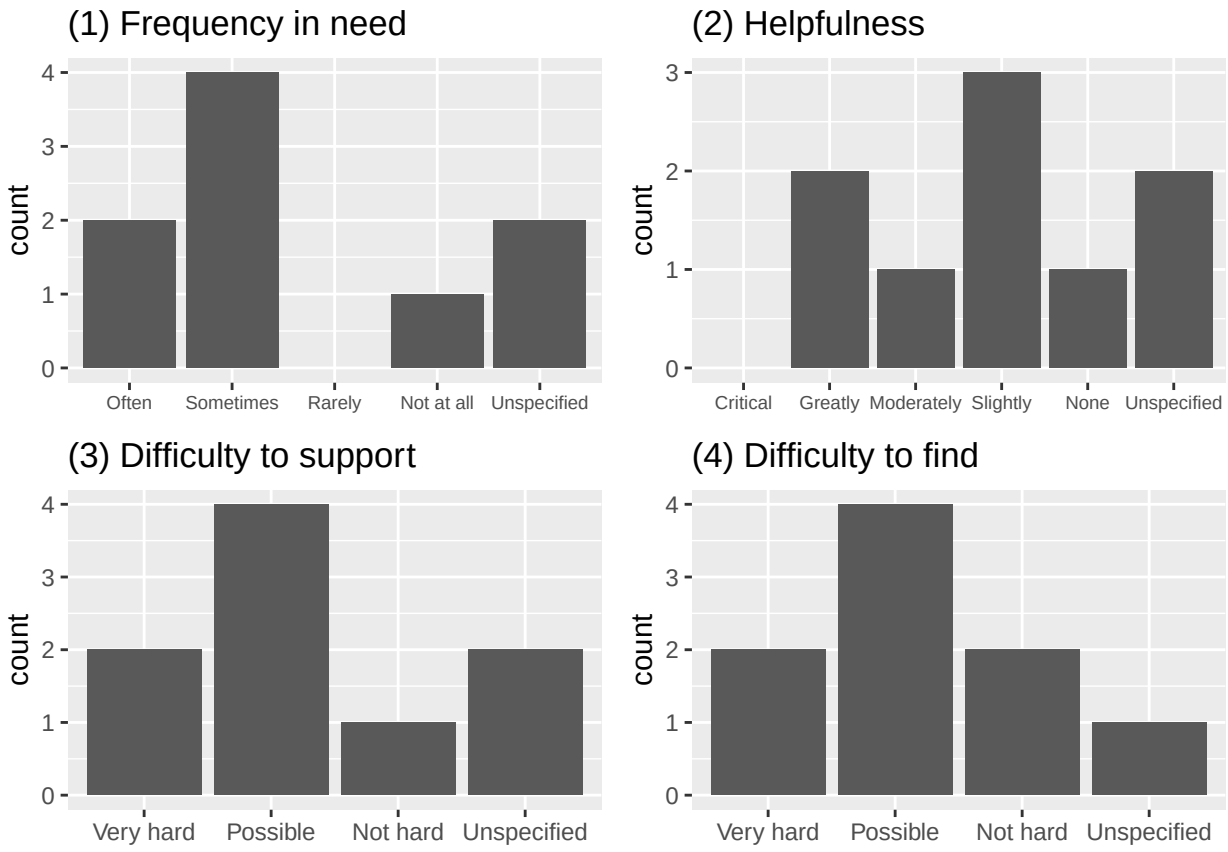
Model Interpretation:

(1) Frequency in need	N
Often	2
Sometimes	4
Rarely	0
Not at all	1
Unspecified	2

(2) Helpfulness	N
Critical to research	0
Greatly help	2
Moderately help	1
Slightly help	3
Not at all	1
Unspecified	2

(3) Difficulty to support	N
Very hard	2
Possible	4
Not hard	1
Unspecified	2

(4) Difficulty to find	N
Very hard	2
Possible	4
Not hard	2
Unspecified	1



Preparation Of Statistical Grant Materials:

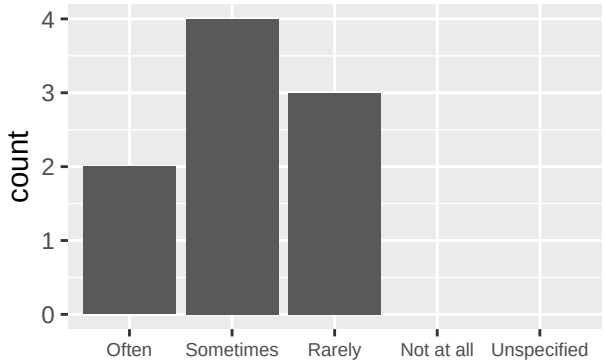
(1) Frequency in need	N
Often	2
Sometimes	4
Rarely	3
Not at all	0
Unspecified	0

(2) Helpfulness	N
Critical to research	1
Greatly help	1
Moderately help	2
Slightly help	2
Not at all	2
Unspecified	1

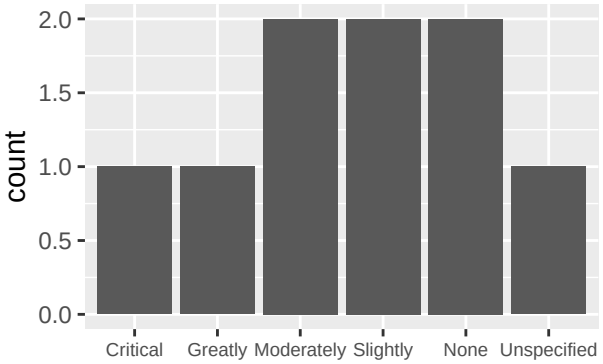
(3) Difficulty to support	N
Very hard	3
Possible	4
Not hard	1
Unspecified	1

(4) Difficulty to find	N
Very hard	3
Possible	1
Not hard	5
Unspecified	0

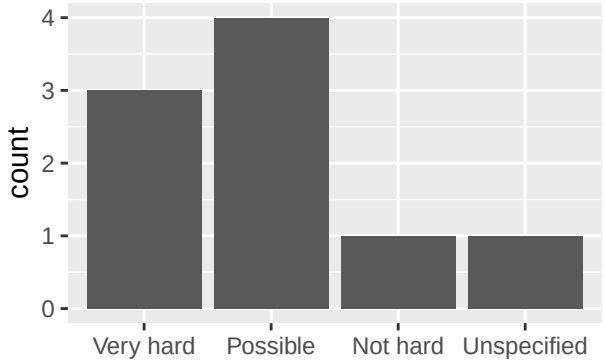
(1) Frequency in need



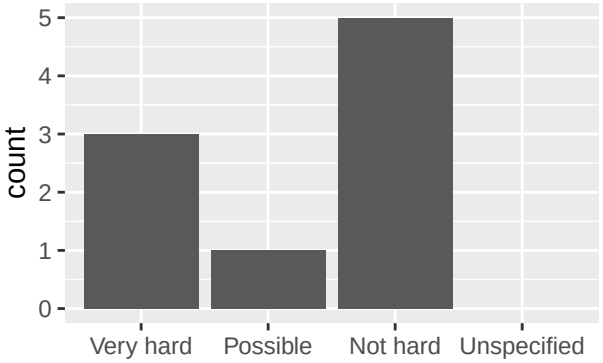
(2) Helpfulness



(3) Difficulty to support



(4) Difficulty to find



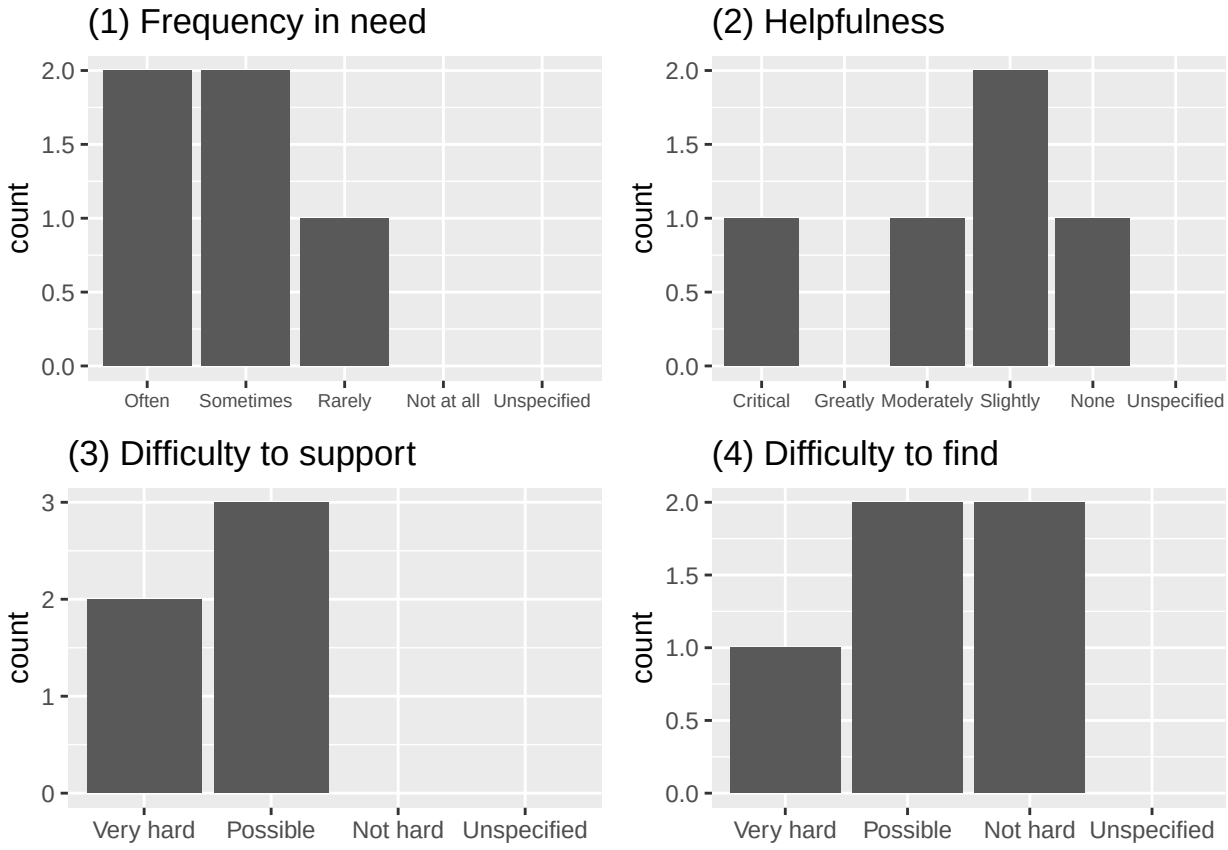
Coding/Software Help:

(1) Frequency in need	N
Often	2
Sometimes	2
Rarely	1
Not at all	0
Unspecified	0

(2) Helpfulness	N
Critical to research	1
Greatly help	0
Moderately help	1
Slightly help	2
Not at all	1
Unspecified	0

(3) Difficulty to support	N
Very hard	2
Possible	3
Not hard	0
Unspecified	0

(4) Difficulty to find	N
Very hard	1
Possible	2
Not hard	2
Unspecified	0



Model Selection And Specification:

(1) Frequency in need	N
Often	2
Sometimes	1
Rarely	1
Not at all	0
Unspecified	0

(2) Helpfulness	N
Critical to research	1
Greatly help	0
Moderately help	0
Slightly help	2
Not at all	1
Unspecified	0

(3) Difficulty to support	N
Very hard	2
Possible	2
Not hard	0
Unspecified	0

(4) Difficulty to find	N
Very hard	0
Possible	3
Not hard	1
Unspecified	0

Research Design:

(1) Frequency in need	N
Often	2
Sometimes	0
Rarely	1
Not at all	0
Unspecified	1

(2) Helpfulness	N
Critical to research	0
Greatly help	2
Moderately help	1
Slightly help	0
Not at all	0
Unspecified	1

(3) Difficulty to support	N
Very hard	1
Possible	1
Not hard	1
Unspecified	1

(4) Difficulty to find	N
Very hard	1
Possible	2
Not hard	0
Unspecified	1

Other:

(1) Frequency in need	N
Often	0
Sometimes	1
Rarely	0
Not at all	0
Unspecified	0

(2) Helpfulness	N
Critical to research	0
Greatly help	0
Moderately help	1
Slightly help	0
Not at all	0
Unspecified	0

(3) Difficulty to support	N
Very hard	0
Possible	0
Not hard	1
Unspecified	0

(4) Difficulty to find	N
Very hard	0
Possible	1
Not hard	0
Unspecified	0

Simulation:

(1) Frequency in need	N
Often	0
Sometimes	0
Rarely	1
Not at all	0
Unspecified	0

(2) Helpfulness	N
Critical to research	0
Greatly help	1
Moderately help	0
Slightly help	0
Not at all	0
Unspecified	0

(3) Difficulty to support	N
Very hard	1
Possible	0
Not hard	0
Unspecified	0

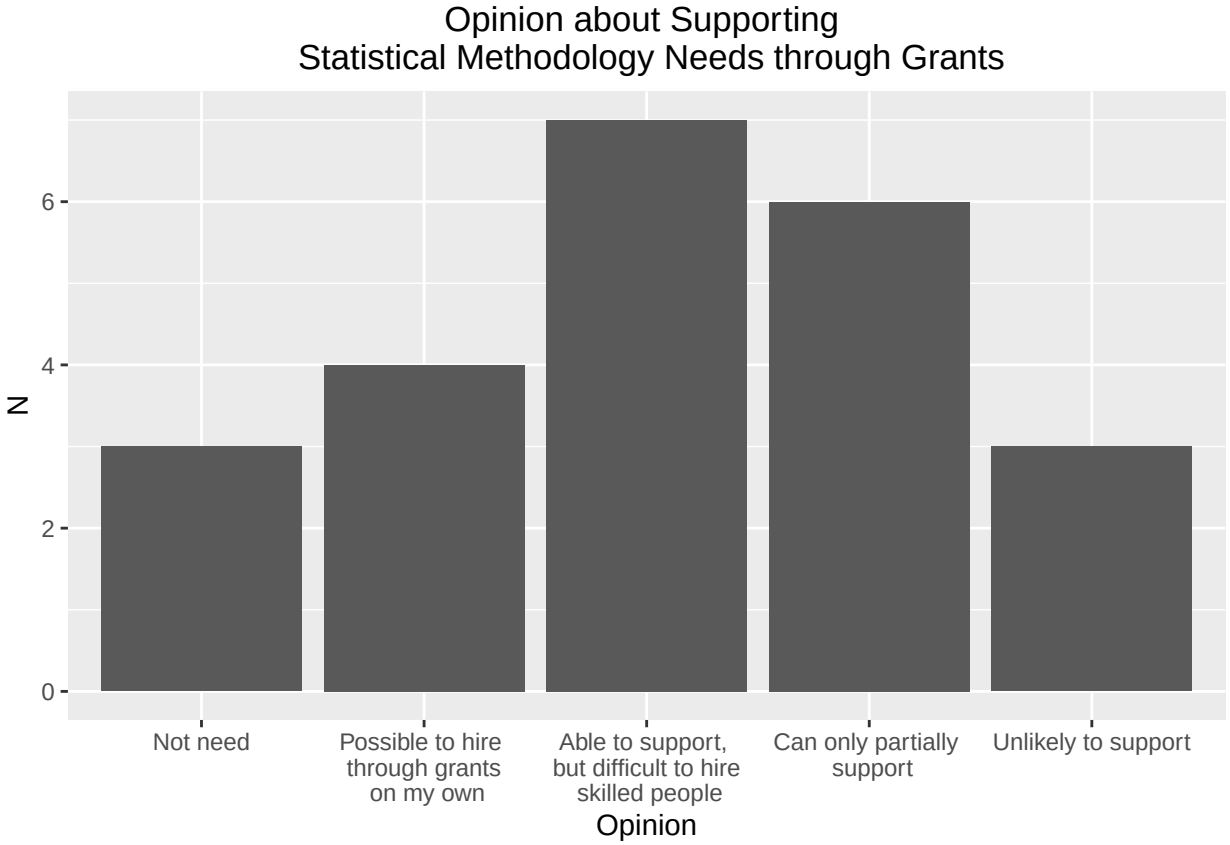
(4) Difficulty to find	N
Very hard	0
Possible	1
Not hard	0
Unspecified	0

Opinion about supporting needs through grants

Q5: Which best describes your opinion about supporting your statistical methodology needs through grants?

Table 14: Opinion about supporting statistical methodology needs through grants

Opinion	N
I don't need to hire anyone to help with statistical methodology	3
It is usually possible for me to hire the personnel needed to satisfy my needs through grants on my own.	4
I would usually be able to support the level of effort that I need through grants, but it is difficult to hire skilled people given the duration of contracts and/or level of effort I require.	7
Usually I can only partially support the level of effort that I need through grants (even if hiring wasn't an obstacle).	6
It is unlikely that I could support any of my needs through grants.	3

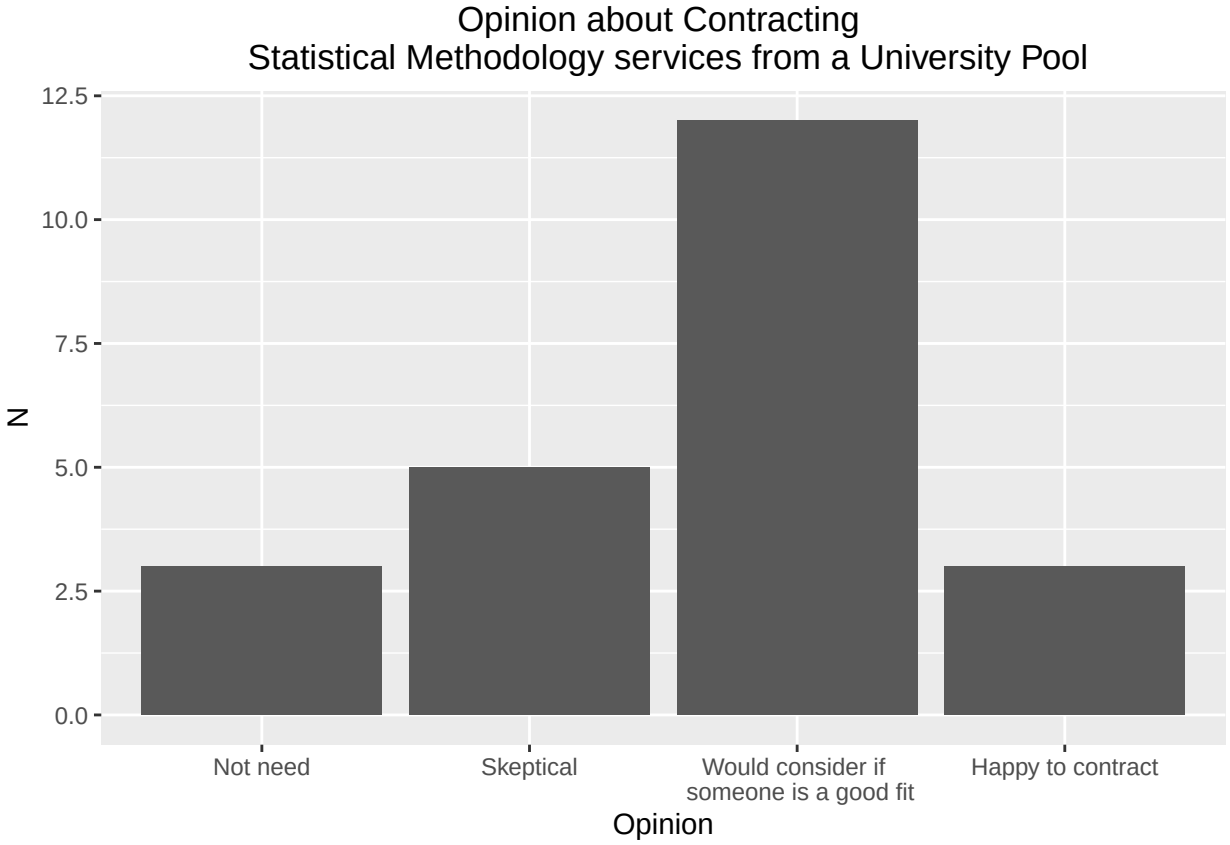


Opinions about services from a university pool

Q6: Imagine there was a university-selected pool of people available to contract. Which best describes your opinion about contracting these services from a university pool?

Table 15: Opinion about contracting statistical methodology services from a university pool

Opinion	N
I do not need any of these services.	3
I am skeptical of an arrangement where I didn't hire the person myself.	5
I would consider contracting such services as long as there is someone that is a good fit for my needs.	12
I would be happy to contract these services through a university pool.	3

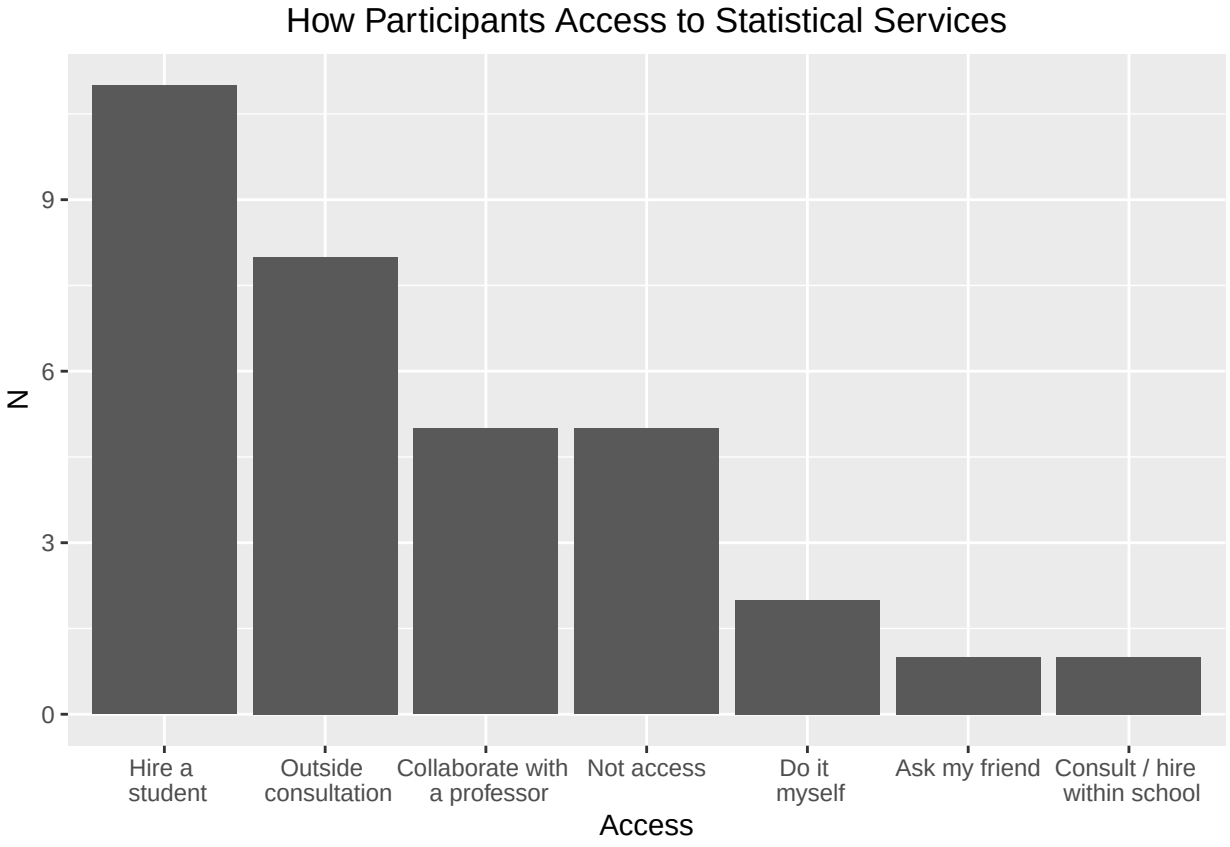


Access to statistical services

Q7: How do you access statistical services?

Table 16: How to Access Statistical Services

Access	N
Hire a student	11
Seek consultation from outside the university	8
Collaborate with a professor	5
I don't	5
Do it myself	2
Ask my friend	1
Consult / hire within school	1



The following table shows the consultation from outside the university specified by the participants.

Table 17: Statistical Consultation from Outide the University

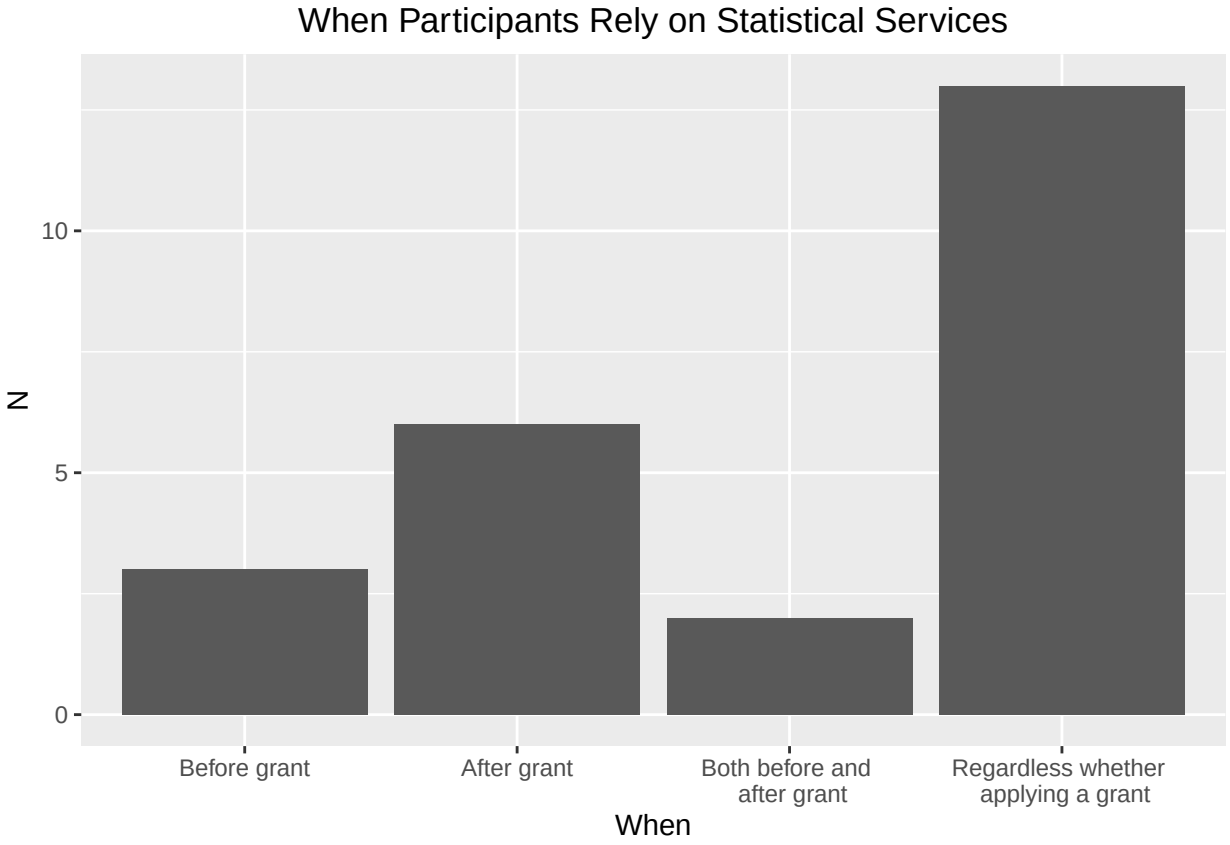
Consultation	N
consult11	1
my former collegue	1
otherconsult111	1

When to rely on the services

Q8: When do you expect or usually rely on the types of services listed above?

Table 18: When to Rely on Statistical Services

When	N
Before a grant is submitted	3
After receiving a grant	6
Both before and after grants are submitted	2
Regardless of whether I am applying for a grant.	13

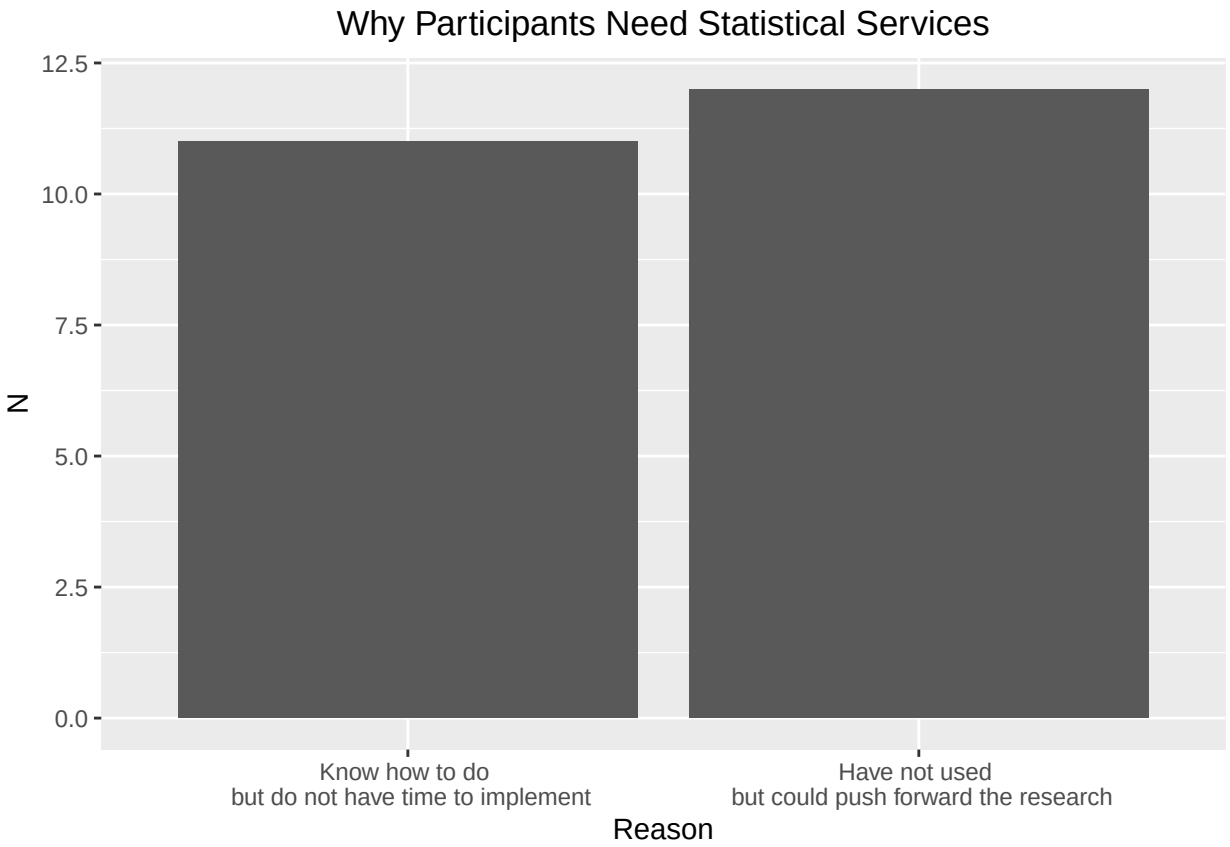


Reason for needing the services

Q9: In general, do you need help with the services listed above because:

Table 19: Why Need Statistical Services

Reason	N
They are methods or things that you know how to do but do not have the time to implement yourself.	11
They are methods or things that are innovative that you potentially have not used yourself, but could help push forward the research.	12



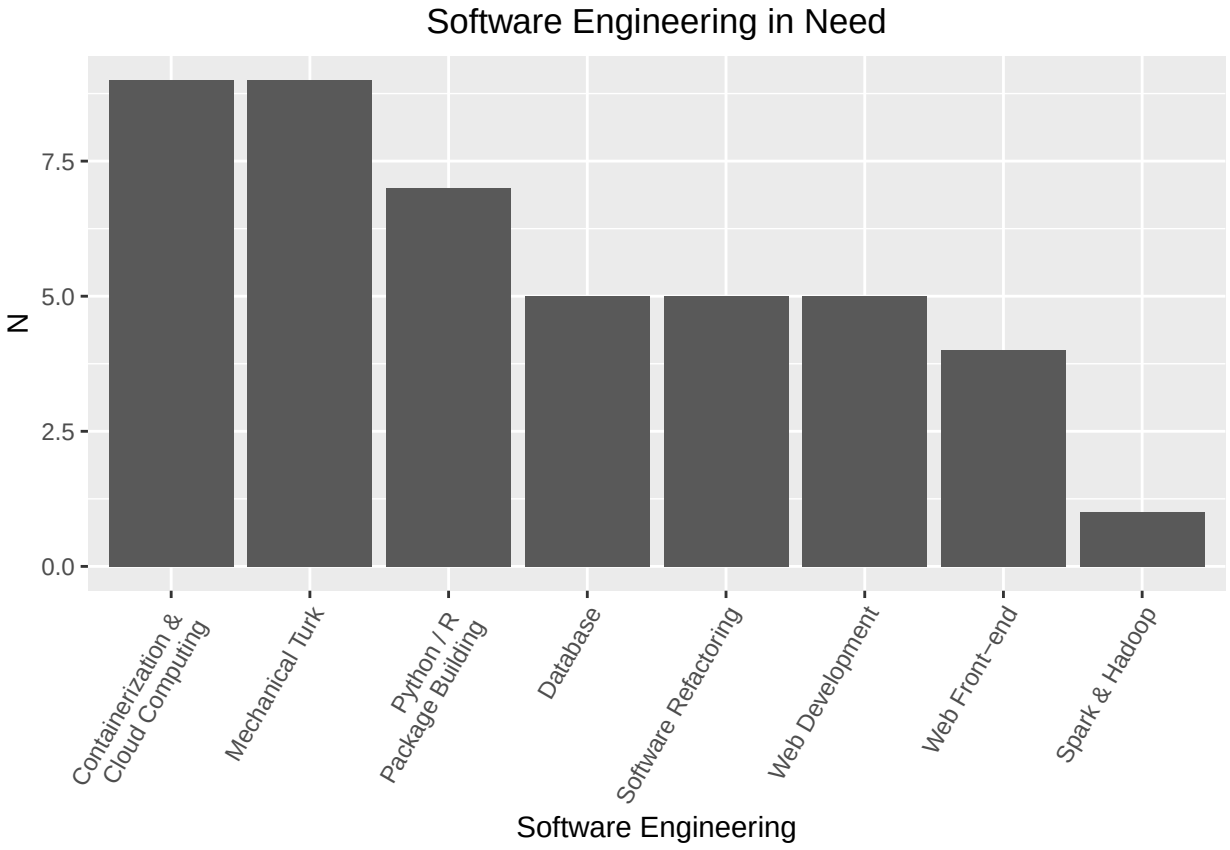
Software Engineering

Software Engineering checkbox

Q Checkbox: Which of the following Software Engineering do you currently use in your work, need help with, or expect that you may need help with in the future?

Table 20: Software Engineering in Need

Software Engineering	N
Containerization And Cloud Computing	9
Mechanical Turk	9
Python Or R Package Building	7
Database	5
Software Refactoring	5
Web Development	5
Web Front-end	4
Spark & Hadoop	1



Subquestions for each of the software engineering checkbox

The following tables are showing the following four questions asking about each of the software engineering selected by the participant:

(1) How often do you currently need to perform these tasks in your research?

(2) To what extent do you think access to people who could help you with these tasks would help your research?

(3) How hard is it for you to currently support someone to help you with these tasks through your grants?

(4) How hard is it for you to currently find people to help you with these tasks?

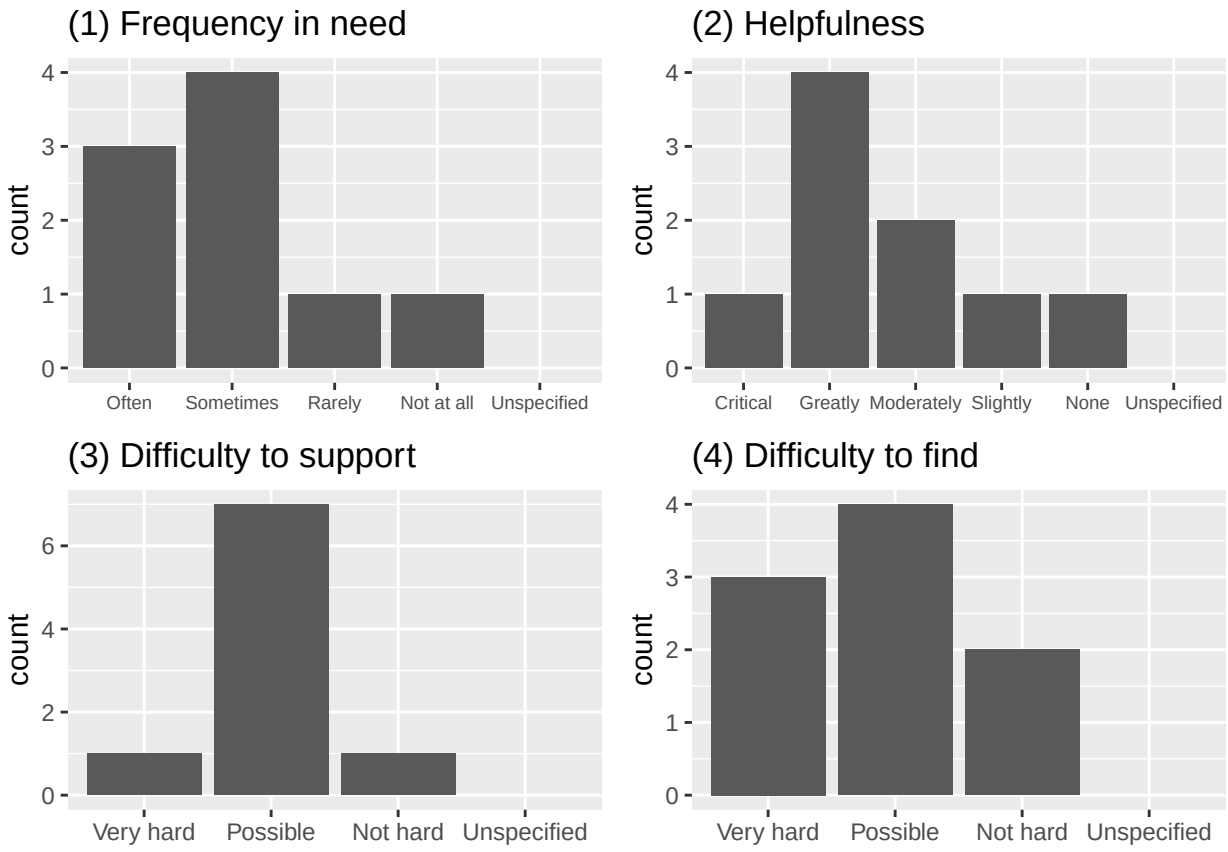
Containerization And Cloud Computing:

(1) Frequency in need	N
Often	3
Sometimes	4
Rarely	1
Not at all	1
Unspecified	0

(2) Helpfulness	N
Critical to research	1
Greatly help	4
Moderately help	2
Slightly help	1
Not at all	1
Unspecified	0

(3) Difficulty to support	N
Very hard	1
Possible	7
Not hard	1
Unspecified	0

(4) Difficulty to find	N
Very hard	3
Possible	4
Not hard	2
Unspecified	0



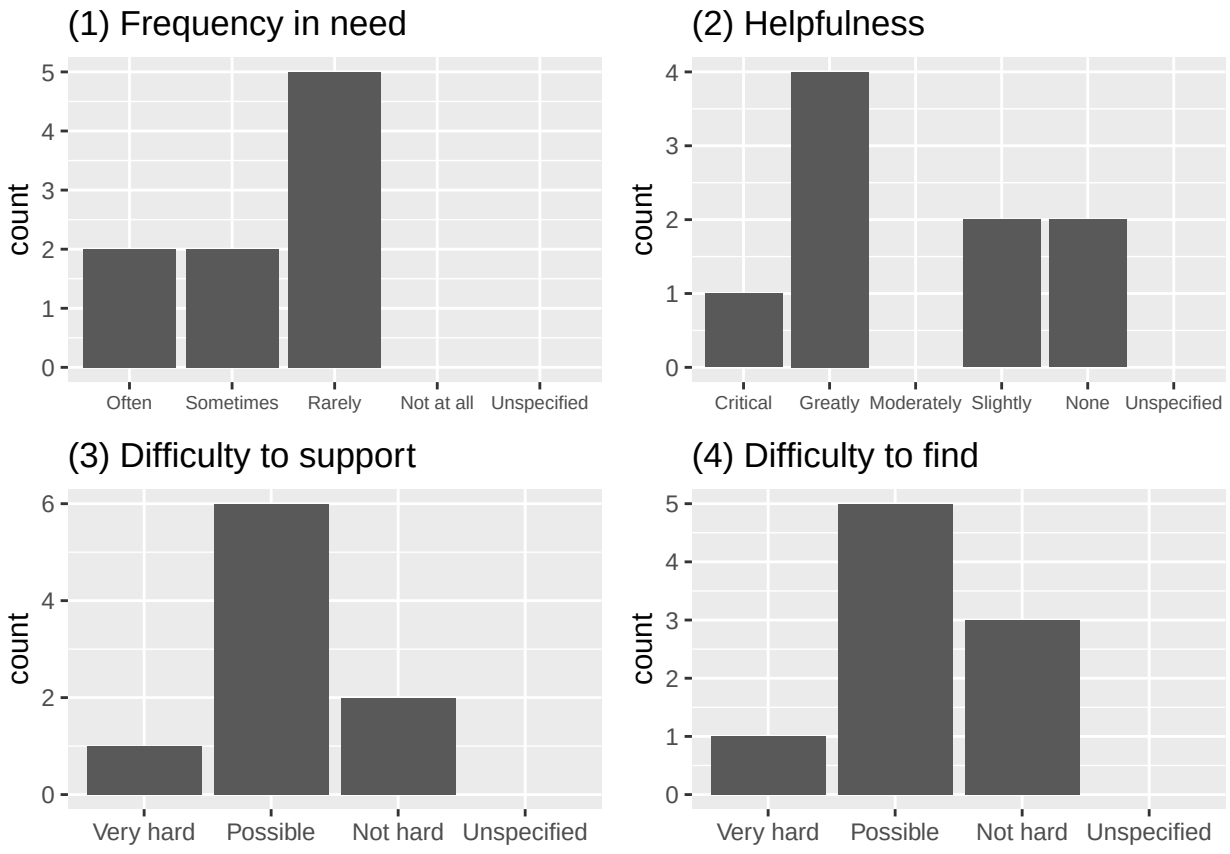
Mechanical Turk:

(1) Frequency in need	N
Often	2
Sometimes	2
Rarely	5
Not at all	0
Unspecified	0

(2) Helpfulness	N
Critical to research	1
Greatly help	4
Moderately help	0
Slightly help	2
Not at all	2
Unspecified	0

(3) Difficulty to support	N
Very hard	1
Possible	6
Not hard	2
Unspecified	0

(4) Difficulty to find	N
Very hard	1
Possible	5
Not hard	3
Unspecified	0



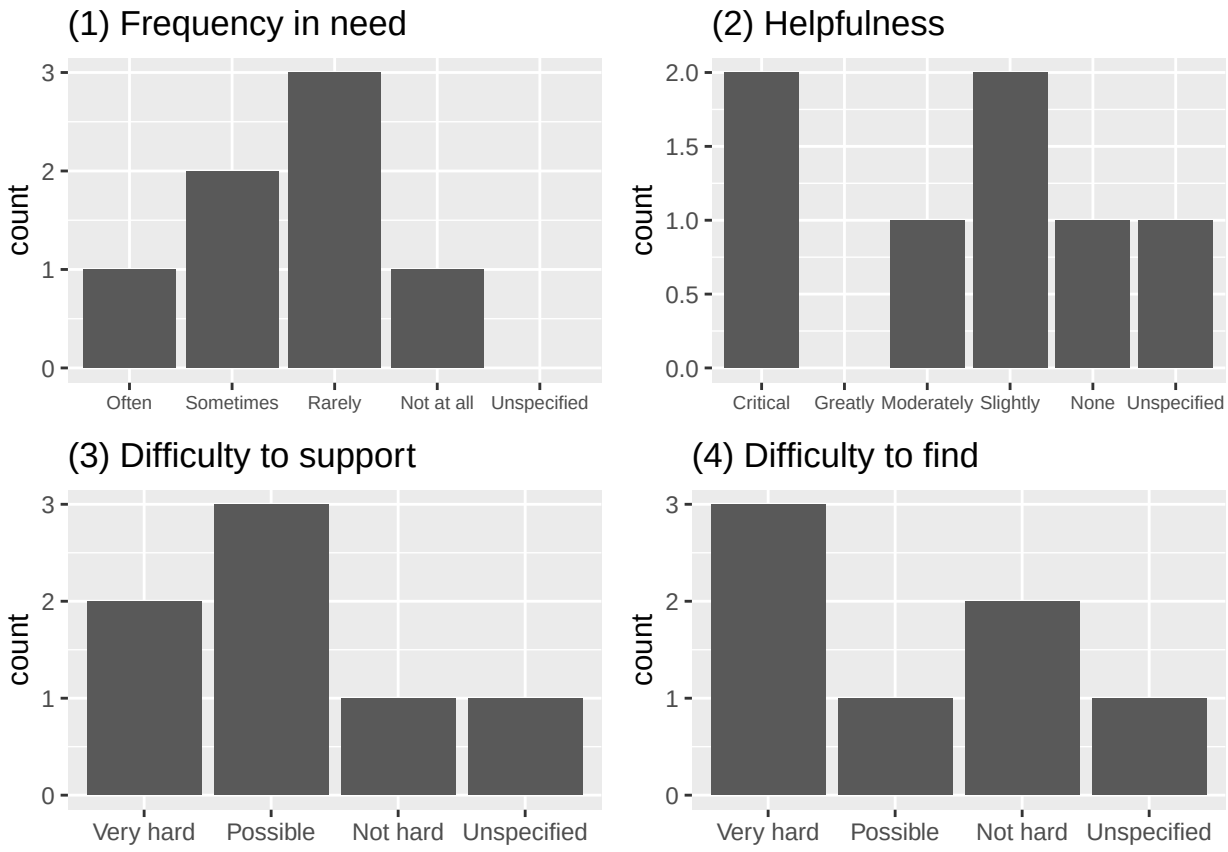
Python Or R Package Building:

(1) Frequency in need	N
Often	1
Sometimes	2
Rarely	3
Not at all	1
Unspecified	0

(2) Helpfulness	N
Critical to research	2
Greatly help	0
Moderately help	1
Slightly help	2
Not at all	1
Unspecified	1

(3) Difficulty to support	N
Very hard	2
Possible	3
Not hard	1
Unspecified	1

(4) Difficulty to find	N
Very hard	3
Possible	1
Not hard	2
Unspecified	1



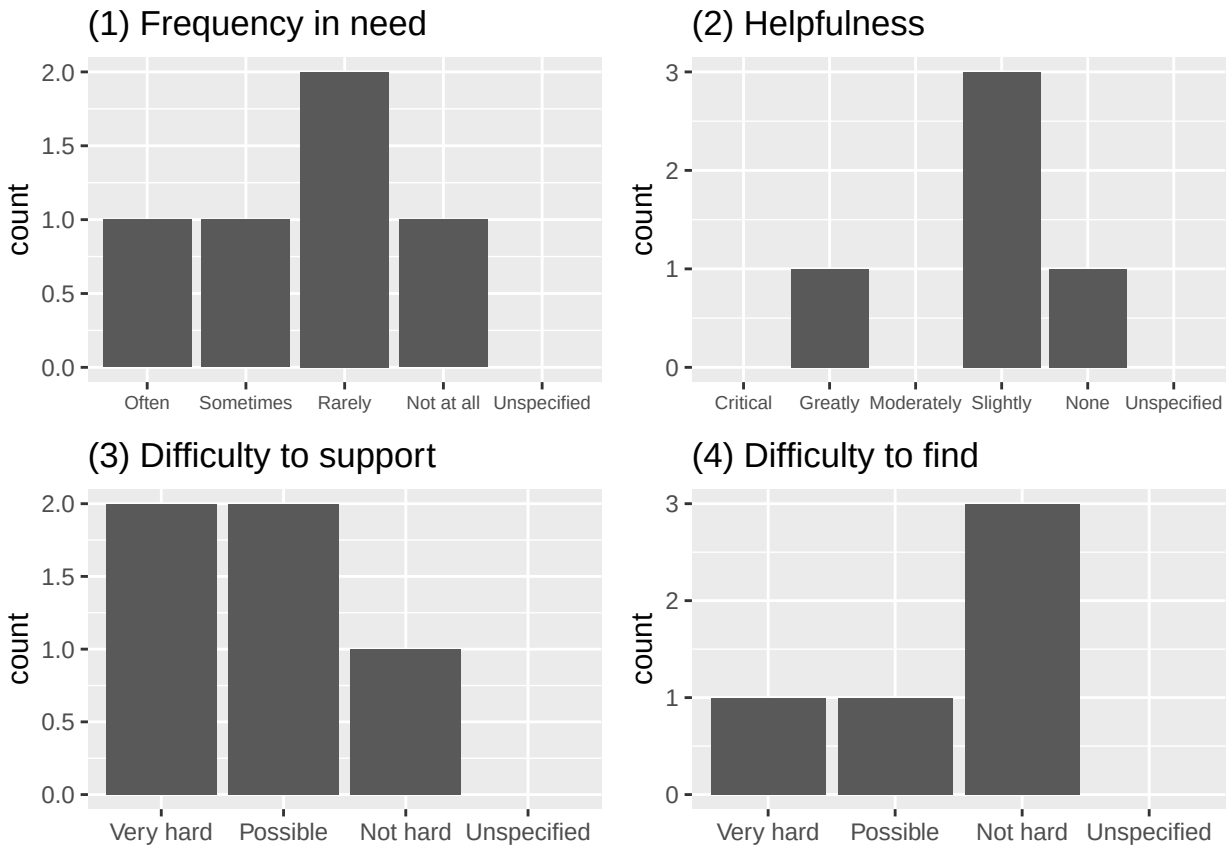
Database:

(1) Frequency in need	N
Often	1
Sometimes	1
Rarely	2
Not at all	1
Unspecified	0

(2) Helpfulness	N
Critical to research	0
Greatly help	1
Moderately help	0
Slightly help	3
Not at all	1
Unspecified	0

(3) Difficulty to support	N
Very hard	2
Possible	2
Not hard	1
Unspecified	0

(4) Difficulty to find	N
Very hard	1
Possible	1
Not hard	3
Unspecified	0



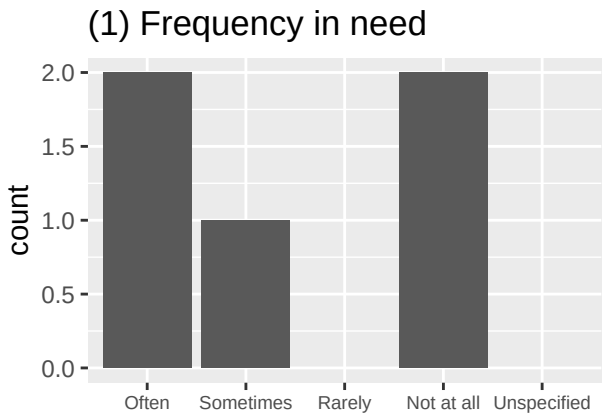
Software Refactoring:

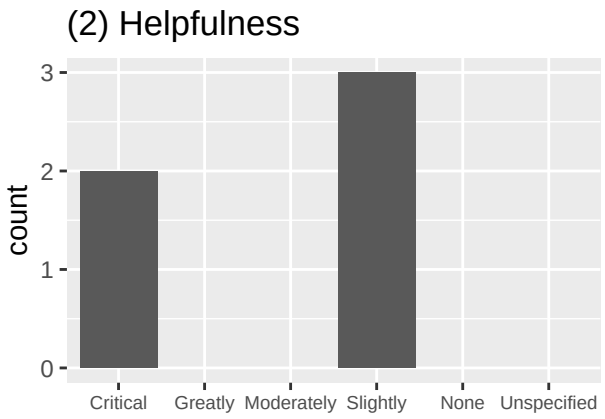
(1) Frequency in need	N
Often	2
Sometimes	1
Rarely	0
Not at all	2
Unspecified	0

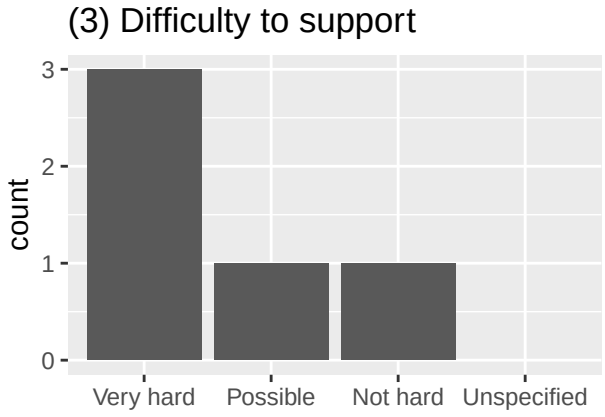
(2) Helpfulness	N
Critical to research	2
Greatly help	0
Moderately help	0
Slightly help	3
Not at all	0
Unspecified	0

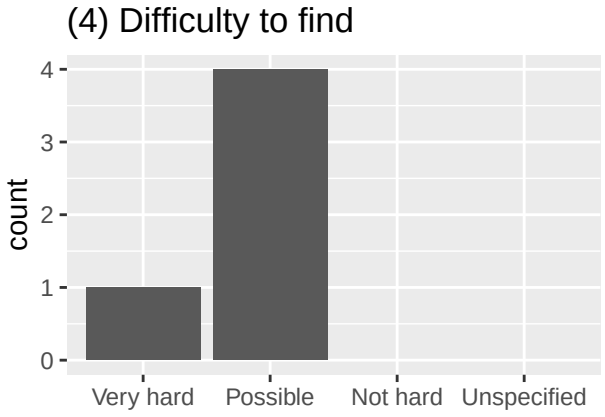
(3) Difficulty to support	N
Very hard	3
Possible	1
Not hard	1
Unspecified	0

(4) Difficulty to find	N
Very hard	1
Possible	4
Not hard	0
Unspecified	0









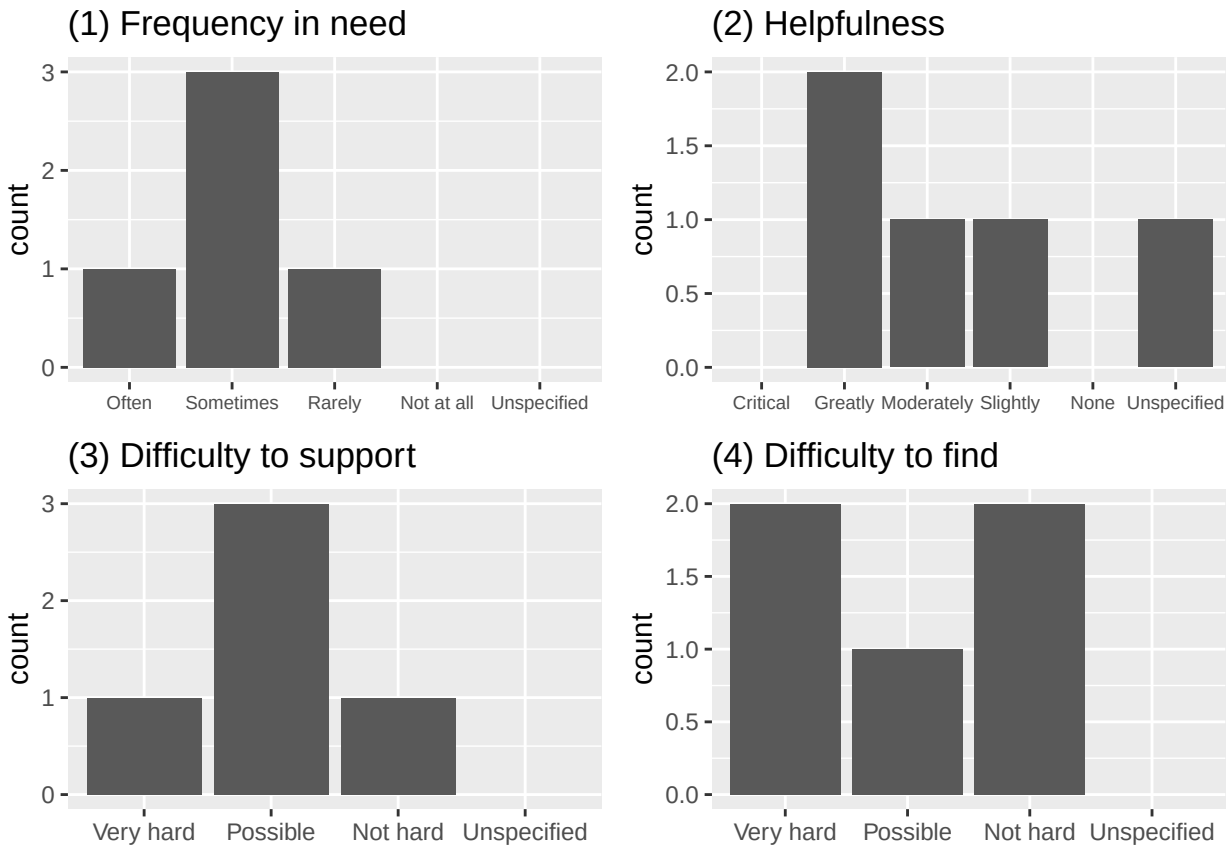
Web Development:

(1) Frequency in need	N
Often	1
Sometimes	3
Rarely	1
Not at all	0
Unspecified	0

(2) Helpfulness	N
Critical to research	0
Greatly help	2
Moderately help	1
Slightly help	1
Not at all	0
Unspecified	1

(3) Difficulty to support	N
Very hard	1
Possible	3
Not hard	1
Unspecified	0

(4) Difficulty to find	N
Very hard	2
Possible	1
Not hard	2
Unspecified	0



Web Front-end:

(1) Frequency in need	N
Often	1
Sometimes	1
Rarely	2
Not at all	0
Unspecified	0

(2) Helpfulness	N
Critical to research	1
Greatly help	0
Moderately help	1
Slightly help	1
Not at all	0
Unspecified	1

(3) Difficulty to support	N
Very hard	1
Possible	2
Not hard	1
Unspecified	0

(4) Difficulty to find	N
Very hard	2
Possible	2
Not hard	0
Unspecified	0

Spark & Hadoop:

(1) Frequency in need	N
Often	0
Sometimes	0
Rarely	1
Not at all	0
Unspecified	0

(2) Helpfulness	N
Critical to research	0
Greatly help	0
Moderately help	1
Slightly help	0
Not at all	0
Unspecified	0

(3) Difficulty to support	N
Very hard	1
Possible	0
Not hard	0
Unspecified	0

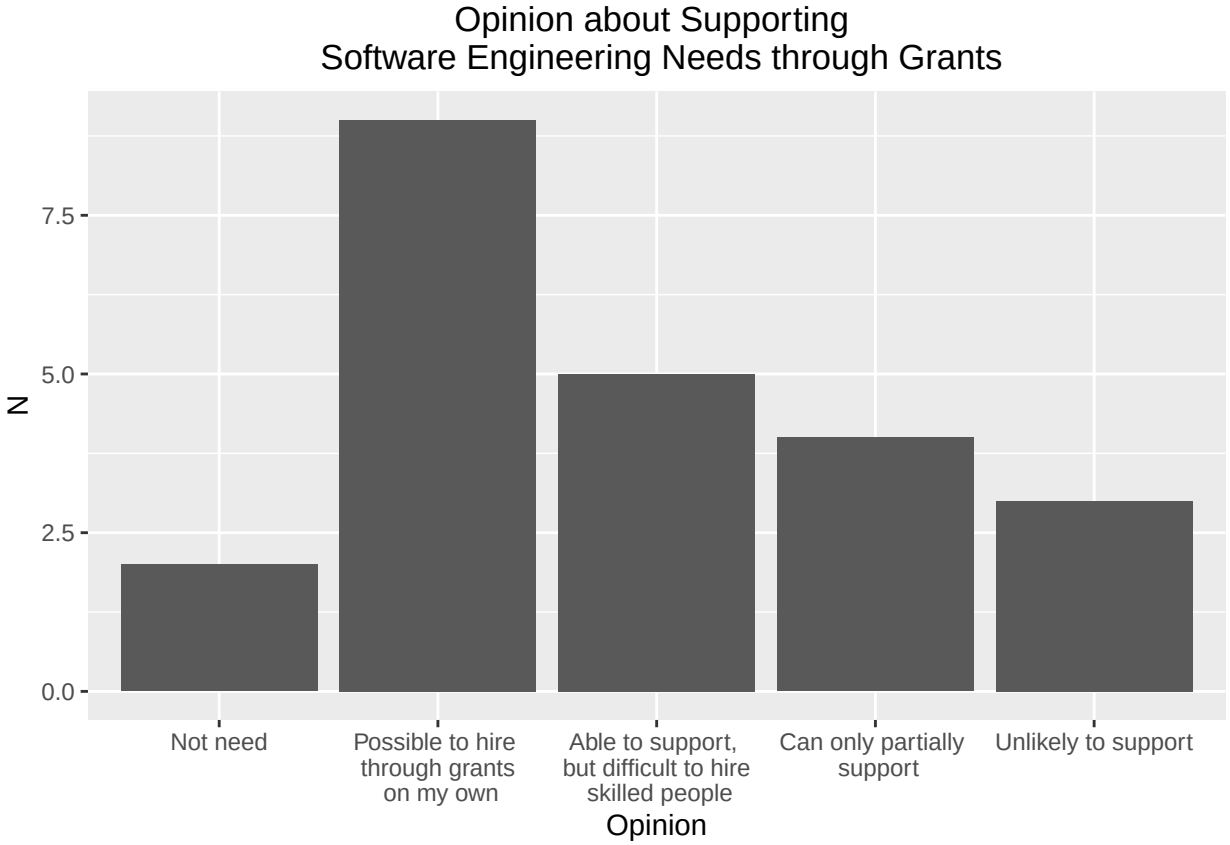
(4) Difficulty to find	N
Very hard	1
Possible	0
Not hard	0
Unspecified	0

Opinion about supporting needs through grants

Q12: Which best describes your opinion about supporting your software engineering needs through grants?

Table 21: Opinion about supporting software engineering needs through grants

Opinion	N
I don't need to hire anyone to help with software engineering	2
It is usually possible for me to hire the personnel needed to satisfy my needs through grants on my own.	9
I would usually be able to support the level of effort that I need through grants, but it is difficult to hire skilled people given the duration of contracts and/or level of effort I require.	5
Usually I can only partially support the level of effort that I need through grants (even if hiring wasn't an obstacle).	4
It is unlikely that I could support any of my needs through grants.	3

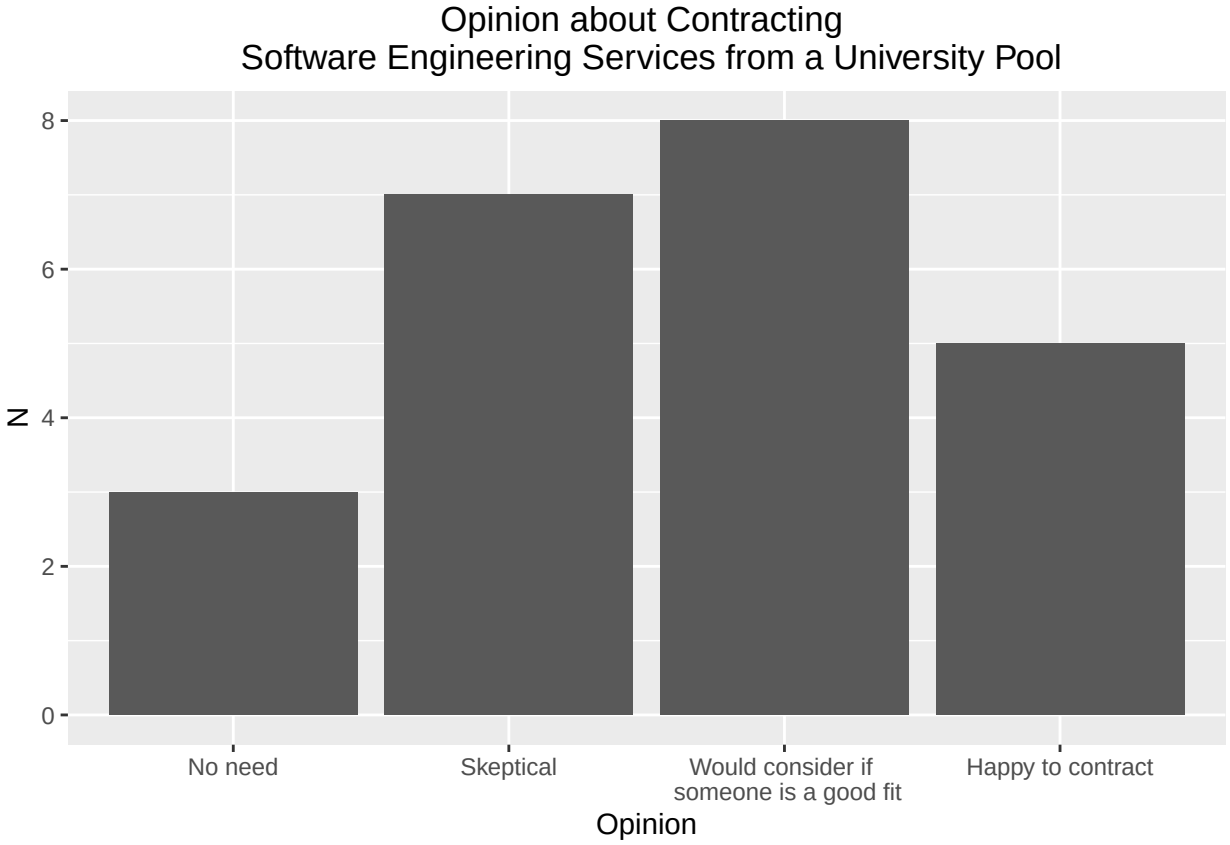


Opinions about services from a university pool

Q13: Imagine there was a university-selected pool of people available to contract. Which best describes your opinion about contracting these services from a university pool?

Table 22: Opinion about contracting software engineering services from a university pool

Opinion	N
I do not need any of these services.	3
I am skeptical of an arrangement where I didn't hire the person myself.	7
I would consider contracting such services as long as there is someone that is a good fit for my needs.	8
I would be happy to contract these services through a university pool	5

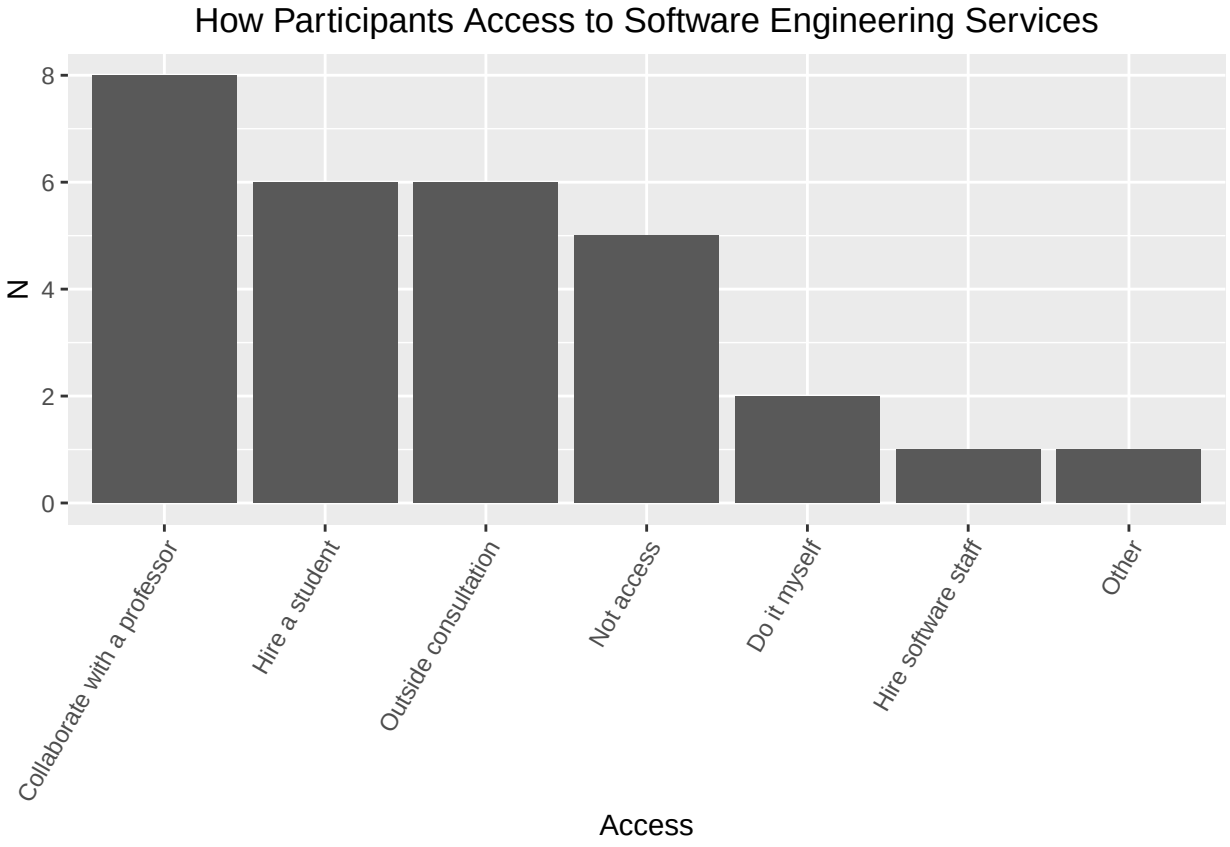


Access to software services

Q14: How do you access software services?

Table 23: How to Access softistical Services

Access	N
Collaborate with a professor	8
Hire a student	6
Seek consultation from outside the university	6
I don't	5
Do it myself	2
Hire software staff	1
Other	1



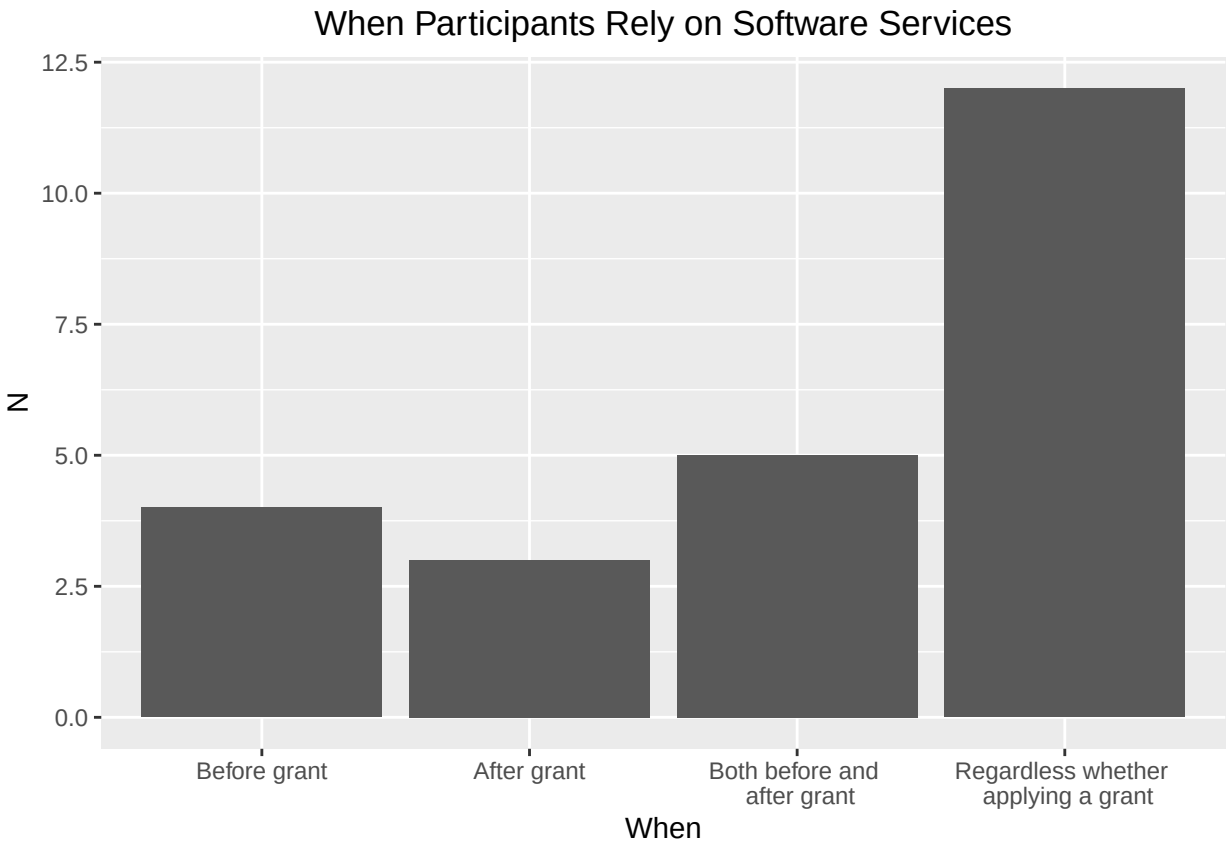
The following table shows the consultation from outside the university specified by the participants.

When to rely on the services

Q15: When do you expect or usually rely on the types of services listed above?

Table 24: When to Rely on Software Services

When	N
Before a grant is submitted	4
After receiving a grant	3
Both before and after grants are submitted	5
Regardless of whether I am applying for a grant.	12

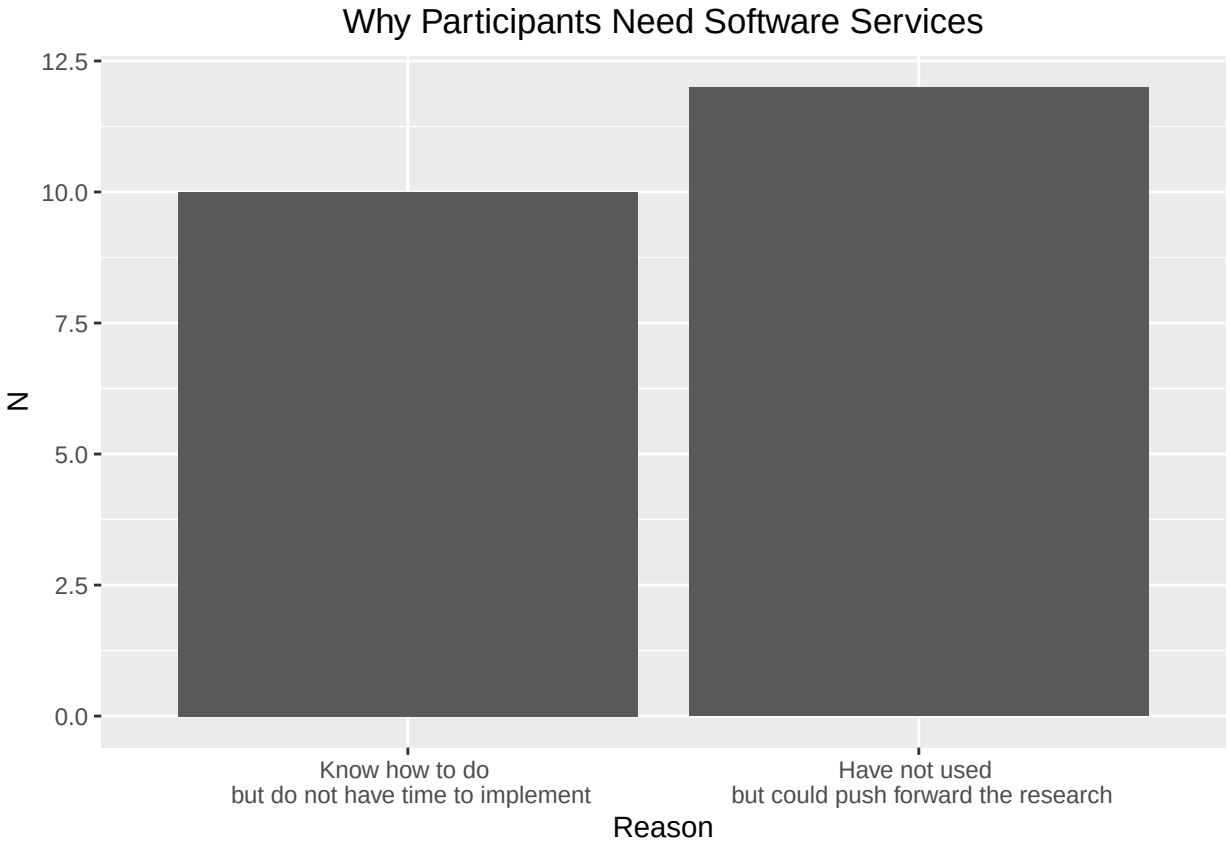


Reason for needing the services

Q16: In general, do you need help with the services listed above because:

Table 25: Why Need Software Services

Reason	N
They are methods or things that you know how to do but do not have the time to implement yourself.	10
They are methods or things that are innovative that you potentially have not used yourself, but could help push forward the research.	12



Open-ended Questions

Public

Other Experience

Table 26: Other Experience (For Public Use)

This is decoy other experience 1.
decoy other experience 3.
decoy other experience 4
;)

Other Comments

Table 27: Other Comments (For Public Use)

:)
:) :) :)
:) :) :) :)
I am just a little cat
This is a fake comment.
decoy comment :)
This is the little cat answering again

DS3 Only

Other Experience

Table 28: Other Experience (DS3 Only)

decoy other experience 2.
decoy experience 5
This is a test experience.

Other Comments

Table 29: Other Comments (DS3 Only)

:) :)
:) :) :) :) :)
This is a test comment.