## Northwestern

# Individual Report for STAT\_301-3\_21: Data Science 3 (Kathleen Coburn)

Project Title: Course and Teacher Evaluations CTEC Spring 2021

Courses Audience: **61**Responses Received: **37**Response Ratio: **60.7**%

#### **Report Comments**

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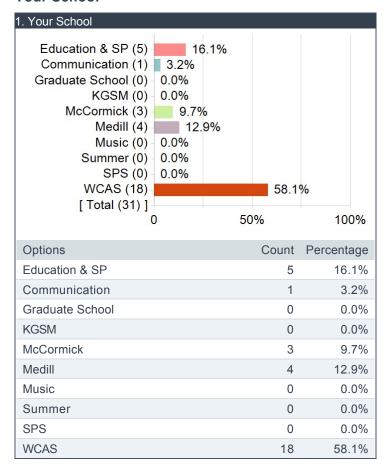
#### **Northwestern University**

#### **Course Evaluations**

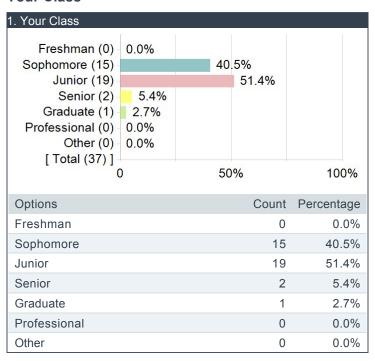
Instructor	Course
Kathleen Coburn	STAT_301-3_21: Data Science 3

#### **DEMOGRAPHICS**

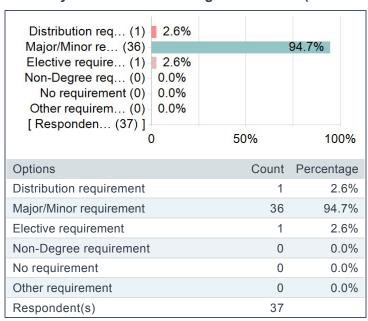
#### **Your School**



#### **Your Class**



#### What is your reason for taking the course? (mark all that apply)

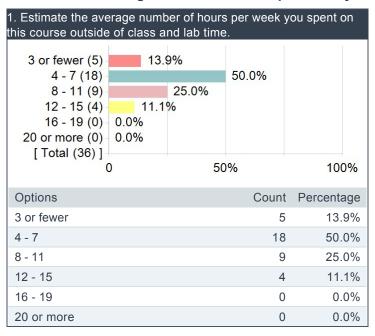


#### What was your Interest in this subject before taking the course?

1. What was your interest in thi	is subject before taking	g the course?
	27.0% 27.0% 27.0%	
0	50%	100%
Options	Count	Percentage
1-Not interested at all	1	2.7%
2	0	0.0%
3	3	8.1%
4	10	27.0%
5	13	35.1%
6-Extremely interested	10	27.0%

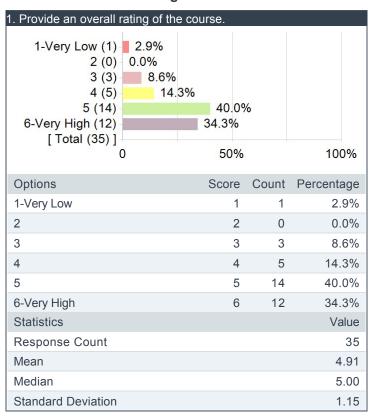
#### TIME-SURVEY QUESTION

Estimate the average number of hours per week you spent on this course outside of class and lab time.

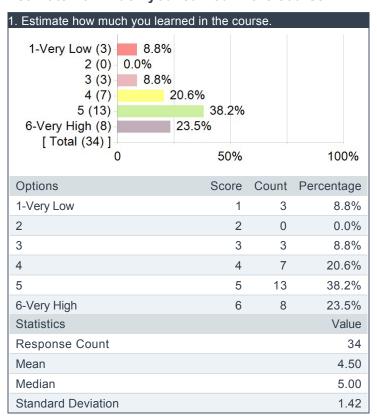


#### **COURSE QUESTIONS**

#### Provide an overall rating of the course.



#### Estimate how much you learned in the course.



#### Rate the effectiveness of the course in challenging you intellectually.

1. Rate the effectivene intellectually.	ess of the	course in o	cha	ıllenging	you
1-Very Low (2)- 2 (0)- 3 (3)- 4 (3)- 5 (14)- 6-Very High (13)- [ Total (35) ]-	5.7% 0.0% 8.6% 8.6%	40. 37.1	%	ó	100%
Options		Scoi	е	Count	Percentage
1-Very Low			1	2	5.7%
2			2	0	0.0%
3			3	3	8.6%
4			4	3	8.6%
5			5	14	40.0%
6-Very High			6	13	37.1%
Statistics					Value
Response Count					35
Mean					4.89
Median					5.00
Standard Deviation					1.32

Rate the instructional materials (texts, audiovisual materials, etc.) used in this course.

1. Rate the instruction etc.) used in this cou		ials (texts,	aud	diovisual	materials,
1-Very Low (2) 2 (3) 3 (2) 4 (3) 5 (16) 6-Very High (8) [ Total (34) ]	5.9% 8.8% 5.9% 8.8%	23.5%	47.	1%	
	)	50	0%		100%
Options		Sc	ore	Count	Percentage
1-Very Low			1	2	5.9%
2			2	3	8.8%
3			3	2	5.9%
4			4	3	8.8%
5			5	16	47.1%
6-Very High			6	8	23.5%
Statistics					Value
Response Count					34
Mean					4.53
Median					5.00
Standard Deviation	1				1.46

#### Rate how well the organization of the course facilitated your learning.

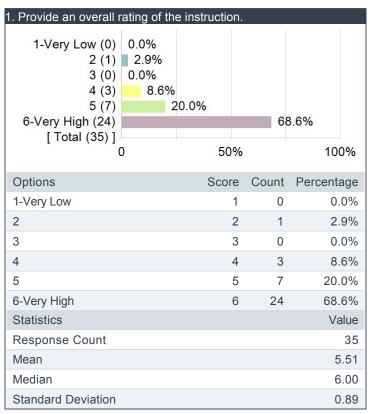
<ol> <li>Rate how well the org learning.</li> </ol>	anization	of the cou	urse facilit	ated your
1-Very Low (2) 2 (3) 3 (2) 4 (3) 5 (10) 6-Very High (12) [ Total (32) ]	6.3% 9.4% 6.3% 9.4%	31.3% 37.5 509		100%
Options		Score	e Count	Percentage
1-Very Low		1	1 2	6.3%
2		2	2 3	9.4%
3		3	3 2	6.3%
4		2	1 3	9.4%
5		5	5 10	31.3%
6-Very High		6	3 12	37.5%
Statistics				Value
Response Count				32
Mean				4.63
Median				5.00
Standard Deviation				1.58

Rate lab/discussion (if present) section's usefulness in learning and applying course material.

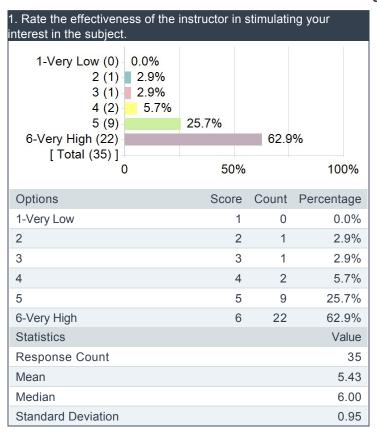
Rate lab/discussio     and applying course in		nt) se	ection	's	usefulne	ess in learning
1-Very Low (1) 2 (1) 3 (0) 4 (4) 5 (11) 6-Very High (10) [ Total (27)]	3.7% 3.7% 0.0% 14	.8%	40		6	
	)		50	%		100%
Options			Scor	е	Count	Percentage
1-Very Low				1	1	3.7%
2				2	1	3.7%
3				3	0	0.0%
4				4	4	14.8%
5				5	11	40.7%
6-Very High				6	10	37.0%
Statistics						Value
Response Count						27
Mean						4.96
Median						5.00
Standard Deviation						1.22

#### INSTRUCTOR QUESTIONS

Provide an overall rating of the instruction.



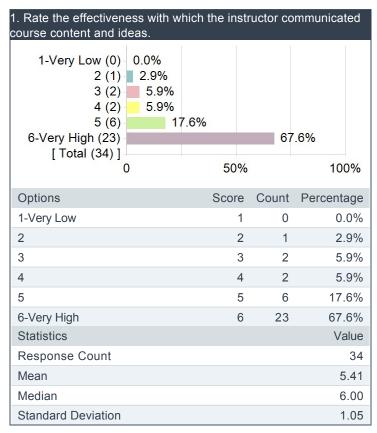
Rate the effectiveness of the instructor in stimulating your interest in the subject.



#### Rate how well prepared the instructor was for the class.

1. Rate how well prep	ared the i	nstru	ctor wa	as	for the	class.	
1-Very Low (0) - 2 (1) - 3 (0) - 4 (2) - 5 (5) - 6-Very High (26) - [ Total (34) ] -		.7%	509	<b>%</b>		76.5% 10	0%
Options			Score	Э	Count	Percent	age
1-Very Low			1	1	0	0	.0%
2			2	2	1	2	.9%
3			3	3	0	0	.0%
4			4	4	2	5	.9%
5			5	5	5	14	.7%
6-Very High			6	3	26	76	.5%
Statistics						Va	alue
Response Count							34
Mean						5	5.62
Median						6	8.00
Standard Deviation						C	).85

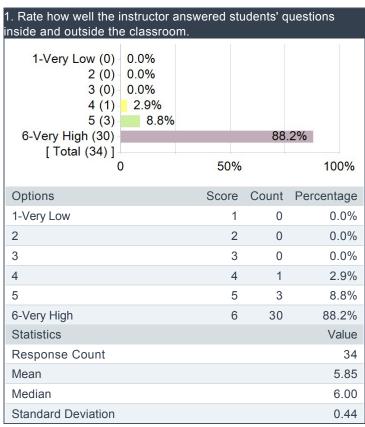
#### Rate the effectiveness with which the instructor communicated course content and ideas.



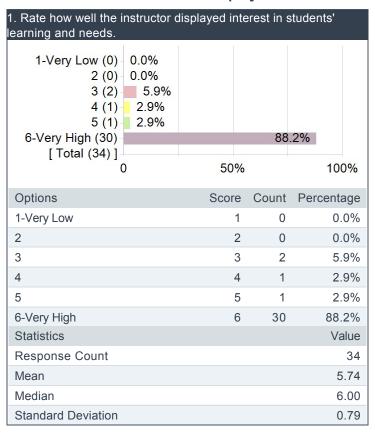
#### Rate the instructor's enthusiasm in teaching this class.

1. Rate the instructor'	s enthusia	sm in tead	chii	ng this c	lass.
1-Very Low (0) - 2 (0) - 3 (0) - 4 (1) - 5 (2) - 6-Very High (31) - [ Total (34) ] -	0.0% 2.9% 5.9%	50	%	91	1.2%
Options		Scor	е	Count	Percentage
1-Very Low			1	0	0.0%
2			2	0	0.0%
3			3	0	0.0%
4			4	1	2.9%
5			5	2	5.9%
6-Very High			6	31	91.2%
Statistics					Value
Response Count					34
Mean					5.88
Median					6.00
Standard Deviation					0.41

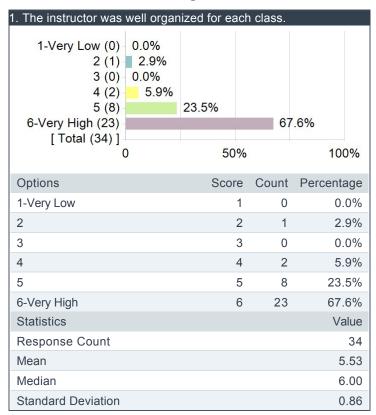
Rate how well the instructor answered students' questions inside and outside the classroom.



#### Rate how well the instructor displayed interest in students' learning and needs.



#### The instructor was well organized for each class.



#### **OPEN-ENDED QUESTIONS**

#### Did the course help you learn? Why or why not?

#### Comments

No, the flipped classroom style isn't right for me.

no the flipped classroom setup makes it hard to learn anything

This quarter has definitely been the most challenging but has had the least amount of coding. Before we were concerned with parsing dates and tidying data, but now we are feature engineering and trying to find the best model to fit the data.

It strengthened my understanding of what I learned in Data Science 301-2.

Yes, I think applying the skills we learned to a competition setting was really good!

Flipped classroom style is really dumb

Yes, it was a great way to finish off the data science sequence.

No, but I think that this was unfortunately just the result of the online format, which really messes with a flipped classroom teaching style.

Yes! This course helped me improve upon my R-skills and ability to feature engineer data effectively for modeling.

It helped because I learned the concepts from last quarter in more detail, but also got introduced to new ones

definitely challenged myself, and learned lots of new RStudio features

At first, I liked the flipped classroom, but now after 3 quarters, I feel like I haven't truly understood a lot of concepts we use.

super effective, I'm just upset at myself for not paying closer attention to lecture!

it's data science. i guess.

I guess.

Yes. It exposed me to more in-depth materials about feature engineering and different model building.

#### Please summarize your reaction to this course focusing on the aspects that were most important to you.

#### Comments

this class is taught with a "flipped classroom" setup and it is really counterintuitive and makes it hard to learn anything. this class is 100% learned on your own, there's really no point in going to class except for the attendance points. unnecessarily difficult and poorly organized

I've heard a lot about machine learning, so it was great to have a brief introduction to the field without it being mindnumbingly overwhelming.

It seemed a lot like a continuation/review of Data Science 301–2. A lot of time was spent in breakout rooms working on labs and projects.

This quarter is about competitions and doing stuff more on your own/with a team rather than about labs. I think it was a lot of fun and useful! While I didn't win the in–class competitions, I definitely was able to place in a few other competitions outside of this class with the skills I learned from the data science minor overall! I hear they're implementing a Python cohort next year; I think that will be more useful than R though.

I really liked how open the entire instructional team made learning in this course. Though the third class in this sequence felt like it got a little bit more knit–picky and felt like less knowledge learned than the previous two courses, I still liked the competition and free choice to explore. The workload was more manageable.

This whole minor sequence needs to be reorganized. Background of machine learning could be useful.

The flipped classroom style class structure isn't very helpful to learning all you do is just to the labs for the week

A solid close to this sequence, not too much additional information, but a nice finish to a great sequence.

I loved being able to work in a group project. Especially with data science, I had not experienced working together and using GitHub, so i felt that was very important especially as I plan on doing this in the near future for work.

Focuses solely on machine learning. Pretty straightforward class, but there is a lot of work. There are weekly labs in addition to two kaggle competitions and a final project.

This course definitely helped to solidify what we had learned about R and modeling throughout the first two quarters of the data science sequence. By the end of the course, I felt a lot more confident than I had a few months ago feature engineering and running and debugging sophisticated models. The Kaggle competitions were a bit stressful, but other than that the labs, readings and final project were all very manageable and interesting. Also, the data science instructional team is phenomenal: they're all so helpful and supportive.

Great ending to the minor, very supportive staff and team

Similar to the previous data science courses except no reading checks

Though the labs itself were quite reasonable, the topics were definitely difficult for me to grasp. Having a group of friends to work with helped immensely.

Lots of modeling and feature engineering work. Professors care a lot and are helpful, it just was a grind sometimes. There's still weekly labs but also modeling competitions toward the end of the quarter that take a lot of time.

#### aight

really great class, but I didn't really utilize lecture effectively and I think that's why I still don't feel confident in my data science / ML skills! professors are excellent and so knowledgeable, kind, and responsive. this is an amazing sequence – also no reason you should not get an A

PSETS are always useful, don't procrastinate on them though

Easy enough class. The final is a group project and you do kaggle competitions.

This class was a lot of work. The Kaggle competitions, weekly labs, and a final project was very time consuming. I spent weeks just working on the competitions.

Do your work on time, you'll be fine. Warning tho, there is a group project in this class for your final, so just like, be warned, don't choose bade people.

I hate the group project in this class. Make sure you have friends in the class so you don't end up like me. The rest of the class is pretty straightforward, similar to the previous 2 classes. The Kaggle competitions weren't that bad.

I would encourage you all to take this class because it is a relaxing, but still rewarding class. You get to learn more about model selection, feature engineering, and more model types. It is the last sequence of data science minor, but to be honest, with a solid foundation of STAT 310–2, this class is more chill.

#### What are the primary teaching strengths of the instructor?

#### Comments

She was very prepared, would answer people's questions in the chat, and was understanding when students struggled with a concept.

She obviously cares a lot about data science and making sure we knew what to do.

Helpfulness! Always open to answering questions, no matter how long they take.

Really like her! She will do great things in her next role! Best of luck

Nice

Very prepared and organized. Taught conceptually to give students the tools to problem solve beyond just assignments and labs. Taught beyond just the textbook to give students a wider range of skills for data science.

Coburn was amazing! I had her all three quarters and she provided a great atmosphere for people to actually enjoy what they were learning.

Dr. Coburn is amazing!! She's so kind and helpful, and truly makes every lecture enjoyable. She's very responsive to questions, and explains difficult concepts clearly. Dr. Coburn is definitely one of my favorite professors that I have had at Northwestern.

KATIE IS LITERALLY THE BEST EVER. She is super helpful, always willing to help and support whenever needed, loves to teach and is just brilliant in all ways, I love her so much and will miss her a lot next year.

Every teaching aspect is a strength

Such a friendly, approachable, kind person; Loved having her as my professor; always happy to help and always encourages questions no matter how simple they are.

responsive, engaging, really good at breaking things down and making data science accessible

Katie was a great professor who was good at teaching and making class chill

good at explaining stuff

Maggie. But also being super nice, genuine, and generous with her time. I'm going to miss you!

Katie is awesome! I will miss her!

Professor Coburn is good at communicating her idea and interacting with students in class by asking some engaging questions. Her dog is a plus and must too.

#### What are the primary weaknesses, if any, of the instruction?

#### Comments

Due to the virtual setting, it was hard at times to stimulate my interest in the subject over Zoom.

none

Flipped classroom

none

None!

None

wish slide decks had more info / reflected the lay version of explaining things

sometimes students go off on tangents for like 8 minutes and that was frustrating occasionally

None come to mind presently.

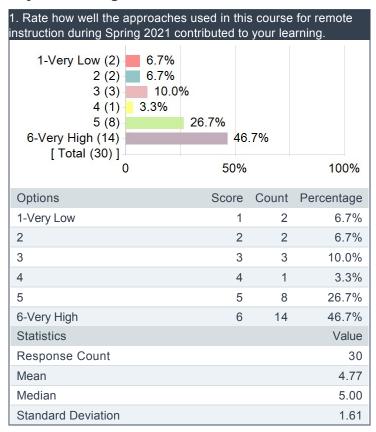
I don't think so.

#### Can you offer suggestions for improvement?

Comments
I think that when everything goes back to in-person, the weaknesses won't be an issue.
no
change clsss structure
none
Nope!
No
more speicfity in slide decks
she's leaving, so good luck, Katie! Thanks for teaching us.
Stay at Northwestern?
Professor Coburn, thanks for the three–quarters of data science teaching! Your teaching successfully simulates my interest in learning more about data science and R. Hope everything goes well for you after leaving northwestern!

#### **REMOTE LEARNING**

Rate how well the approaches used in this course for remote instruction during Spring 2021 contributed to your learning.



### Which aspects of the remote instruction helped contribute to your success in this course? Please explain.

#### Comments

Having two screens has been a life saver. It is great to have the lecture on one screen and code along on another. I think this is the only class where I think it being online is better than it would have been in person.

I liked when we worked through labs together.

Office hours / group work was really helpful.

nothing

Very casual and interactive setting.

This course utilized Zoom very effectively, combining large lecture time with breakout room work time. Canvas was also extremely well organized, with detailed information about class agendas and clear due dates. Campuswire was also a great addition to the remote instruction, providing an online platform where we could communicate with other students and ask questions.

Online lecture recordings, online assignments

Online classroom help (Campuswire);

breakout rooms with TAs and professors

Screen-sharing!

soft deadline for PSET (within 2–days and lose 1 pt), videos zoom, responsiveness of professors on zoom during lecture, large window of OHs, team project at the end was nice because I got to see how other people were doing their projects and learn from them rather than just being in my own bubble not sure if I was doing things right

I think coding-based classes are easier online because of screen sharing and split screen

Bro remote learning sucks. nothing contributed to my learning

Generous office hours, thank you for that!

I would say campuswire and many accessible online textbooks and resources. Campuswide provides us a much more convenient platform and these online textbooks and resources can let us learn easily during the remote time.

#### Which aspects of the remote instruction could be improved? Please explain.

#### Comments

There was too much time spent in breakout rooms, that I didn't take advantage of — I would have rather liked to go over more concepts.

Not much, thought it was good.

change class strucutr

n/a

I really just don't think that this class is designed for remote learning.

None!

None

I learn better when we do coding walkthroughs or walkthrough the material in the text and explain it piece by piece because it's confusing. The group project also does not help with learning.

required lecture didn't actually help me (and other people I know in the class) – it would've been nice to have actually harsher incentives to show up AND PAY ATTENTION.

Not being remote.

I think, maybe put reading checks back so we can keep more tack of the readings.