



STATISTICS PF SUMMARY

Xiang Meng, Statistics PF, 2022-23

PEDAGOGY COURSE

Practice Teaching

Board
teaching

Slide
teaching

Concept Discussions

Board /
Slide basics

EDIB

Grading

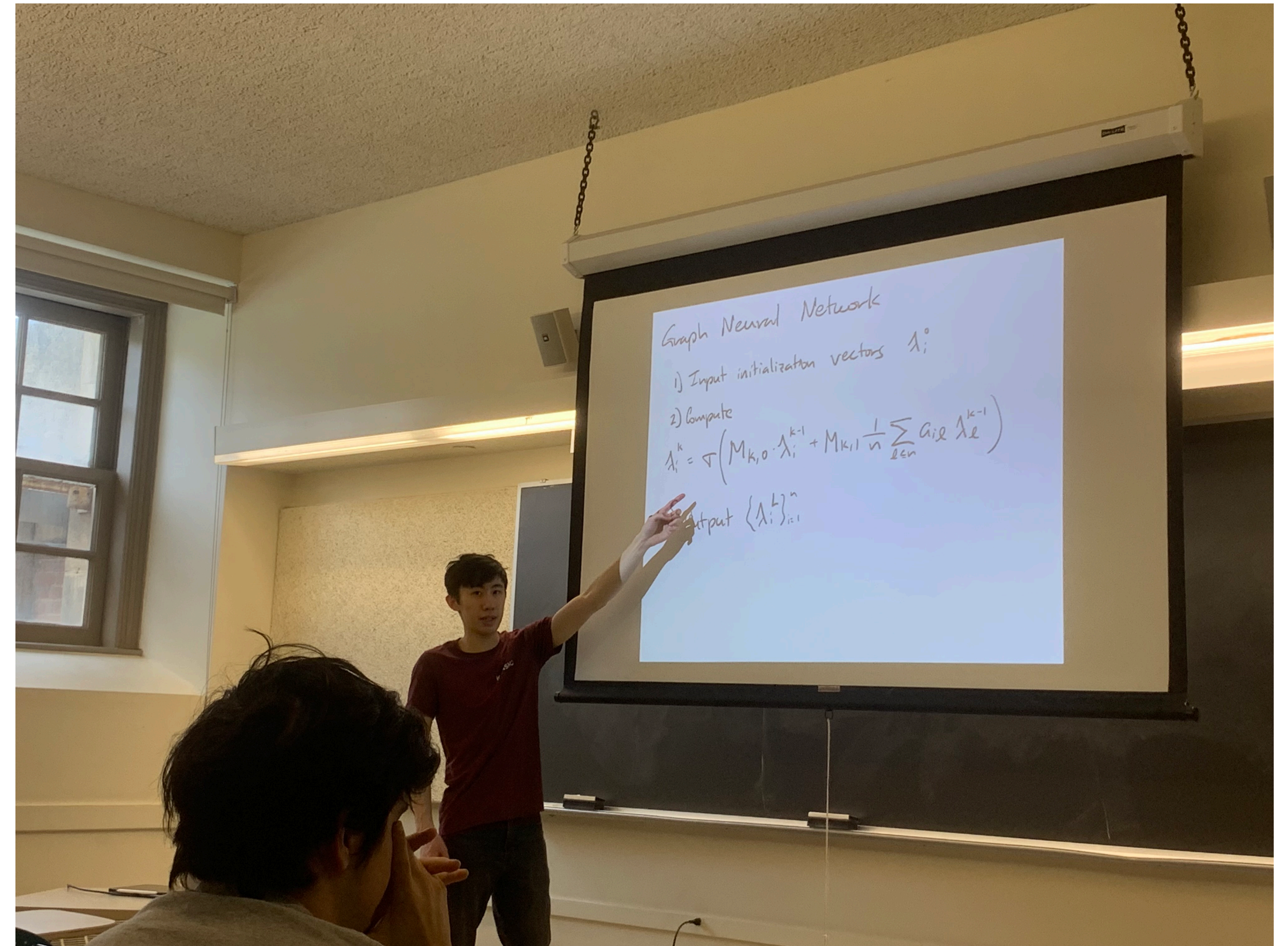
Elevator
pitch

Paper
review

- Students like practice teaching, and they improved a lot.
- Concept discussions were less popular than the practice teaching.

“I’VE GOTTEN MUCH BETTER AT...”

- Making useful visual aides (especially slides)
- Pacing: i.e., matching my expectations of how much material I can get through to how much material I actually get through.
- My confidence in speaking to an audience has improved
- Diverse topics from boardwork to slides to elevator pitch to paper reviews makes me feel more prepared for things



A student presenting with much clearer note and improved confidence

A SURVEY ON WHY TEACHING MATTERS IN STATISTICS

- Good to get this straight because:
 - For G1: Get them more motivated and serious on teaching
 - For G2+: Teaching can be burdensome and tiring.

RESULT OF THE SURVEY

- In one word, teaching has taught me...
 - Communication, Humility, Insight
 - Statistics
- As a teacher I've learned...
 - Always seek a clearer explanation, aim for deep understanding
 - How to see statistics ideas from many perspectives.
- Teaching is important because...
 - Helping the next generation to be statistically well-educated citizens
 - Have a positive impact on students' trajectories

Detailed handout on survey result is available

Highlights from the survey on "Why teaching matters in statistics"

Xiang Meng, Statistics PF 2022-23, 27 Apr 2023

- Participants had between 0 and 15 years of experience teaching statistics.
- The majority of participants had the main teaching role of either Instructor or Teaching Fellow (TF).
- Teaching has taught participants various skills such as communication, patience, and understanding.
- Participants have learned that it is important to aim for deep understanding, communicate clearly, and keep the student's needs in mind.
- Teaching is important for the students' learning, but also for the instructor's own learning and knowledge-sharing.
- Participants generally have a positive attitude towards teaching, with an average rating of 8.1 out of 10.
- Participants' attitudes towards teaching are mainly influenced by their enjoyment of sharing knowledge with students and helping them grow.
- Participants report that their teaching has influenced their research by providing them with new insights and a deeper understanding of the material.
- Research can also influence teaching by providing modern and interesting examples relevant to today's applied problems.
- For PhDs and Postdocs, teaching can be helpful for developing organization and communication skills, and gaining a deeper understanding of their field.
- One participant expressed concerns about anonymity in the survey.

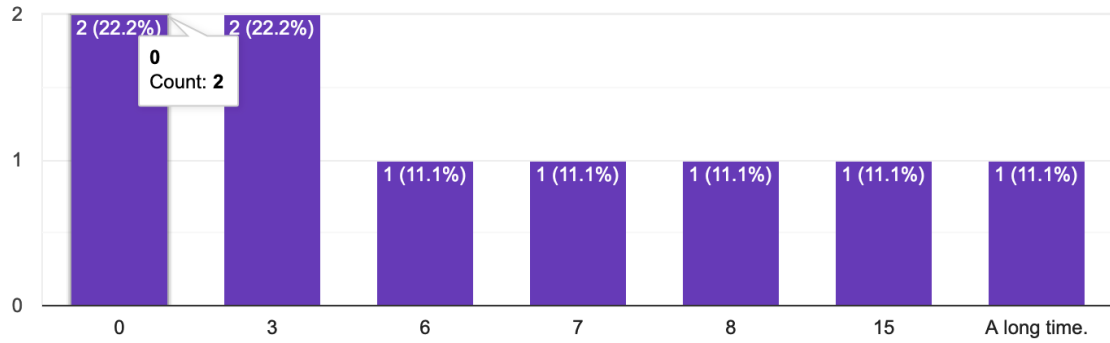
Overall, the survey highlights the importance of teaching in statistics and how it can benefit both the students and instructors, as well as their research and career development.

Appendix: Detailed summary

How many years have you been teaching statistics

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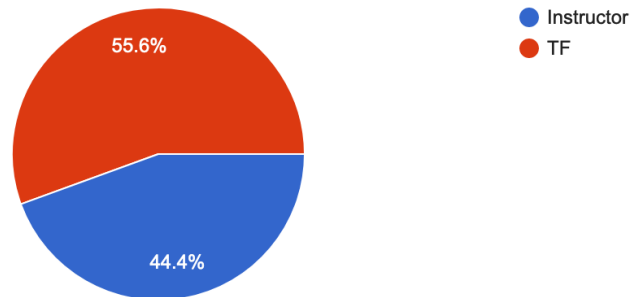
9 responses



Main teaching role

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9 responses



In one word, teaching has taught me...

9 responses

Communication

humility

to unpack and revisit how I think about how I learned what I teach.

insight

patience

statistics

tolerance

Understanding

kindness

As a teacher I've learned...

9 responses

Pedagogy

a lot about communication, and a much deeper understanding of the material I've taught

it is important to know the interests and motivation of your audience.

always seek a clearer explanation, try simple and extreme examples, aim for deep understanding

that i understand topics better once i teach them.

how to see statistics ideas from many perspectives.

How to properly tell my students I don't know sth

how to understand my own research

that it's important to keep the student's needs in mind

Teaching is important because...

6 responses

Giving back

Well I'd say the main importance of teaching is to the students, who get to learn new material. But it is also important for the instructor as a way to connect with students, share their knowledge, and learn themselves.

it makes learning more efficient.

helping the next generation to be statistically well-educated citizens, have a positive impact on students' trajectories

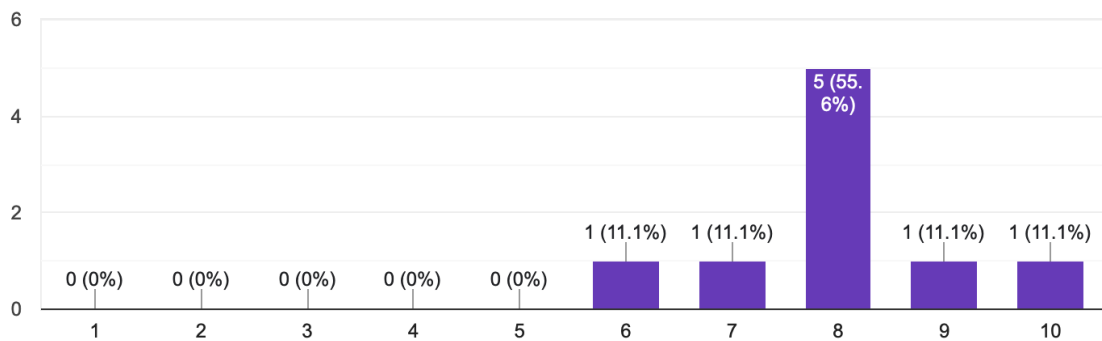
it helps students understand important ideas, and helps us refine our own ideas

it's how we help people learn

What is your attitude towards teaching?

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9 responses



Please explain

6 responses

I enjoy sharing knowledge with students and help them grow

I generally find teaching quite enjoyable--when I can prepare properly for it. It can be frustrating when other obligations come up that make it hard to be prepared as I want to be to teach a lecture, and still have to give the lecture without all the preparation I would have liked.

very rewarding, but also hard work with occasional frustrations

I love teaching but there are realities of teaching that can be difficult (grade inflation, cheating, etc).

I do sometimes worry that too much teaching burden makes it hard to get research done.

I haven't actually taught before, so I'm just guessing

How has your teaching informed and influenced your research in statistics?

6 responses

Not to a large extent

All of my teaching has dramatically improved my understanding of the material being taught, and that has continued to be the case even when teaching courses multiple times--each time I teach it I gain new and significant insights I hadn't seen before, and some of these have translated directly into my research.

having to explain a concept clearly is a good way to make myself understand it more deeply. Even seemingly basic concepts often have various subtleties.

Makes me a better communicator and a better coder.

I've had to think much harder (and, I hope, improved a great deal) in how I conceive of and communicate my own research.

I haven't taught before

How has your research informed and influenced your teaching of statistics?

6 responses

Not to a large extent

Again, pretty directly, as I have had the luxury of teaching on topics that hew quite closely to my research interests. Thus, I am always incorporating my understanding of the material that I gain from research into my teaching.

choosing real, modern, interesting examples rather than boring, outdated examples

Helps me bring interesting examples and methods into my classes. Helps me see what methods are relevant to today's applied problems.

Only through the content of what I (expect to) teach.

I haven't taught before

To PhDs and Postdocs: How might teaching in statistics be helpful to your career?

4 responses

Develop organization and communication skills

N/A

(1) It's useful because teaching is part of an academic job. (2) Teaching well is closely related to communicating well in general, so it's also useful in that regard. (3) Interesting ideas for research often emerge from teaching.

Teaching is important for helping you gain a deeper understanding of your own field, and to help you clarify for yourself what is canonical, important, and modern. Designing a course is very much about designing the perception of your field for the next generation.

Other thoughts

1 response

I appreciate your interest in this topic. I do want to note though that your survey is not really anonymous and you made the questions which make it easy to identify people required.