



# ECMA 31350 1, ECMA 31350 1 - Machine Learning for Economists - Instructor(s) Kirill Ponomarev

Project Title: **Graduate Course Feedback - Winter 2023**

Number Enrolled: **32**

Number of Responses: **18**

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## Report Comments

Opinions expressed in these evaluations are those of students enrolled in the specific course and do not represent the University.

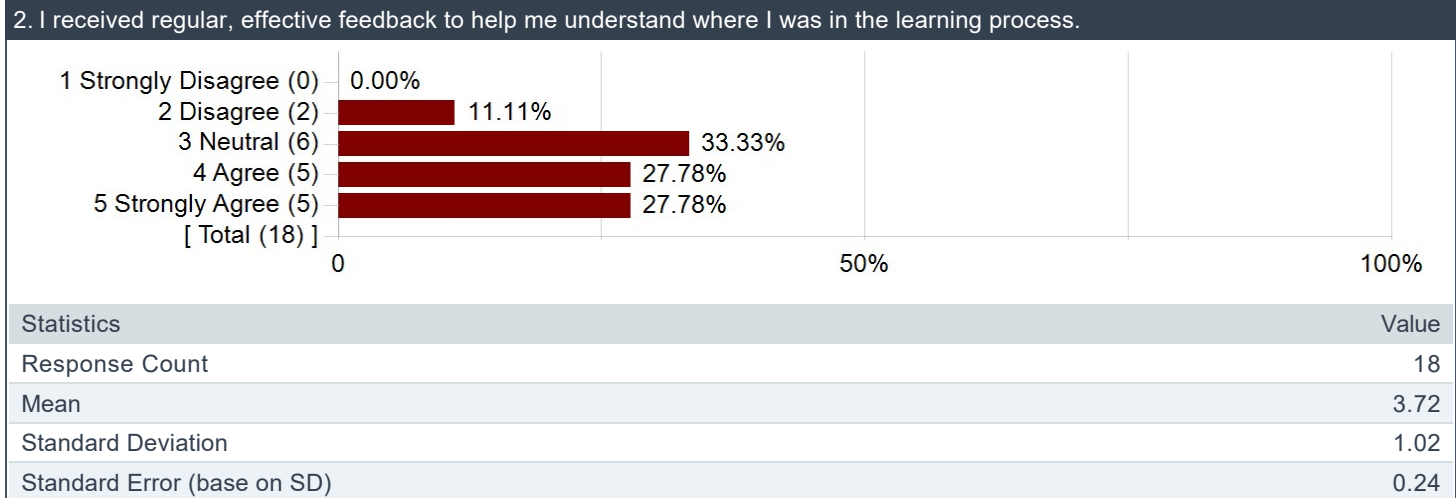
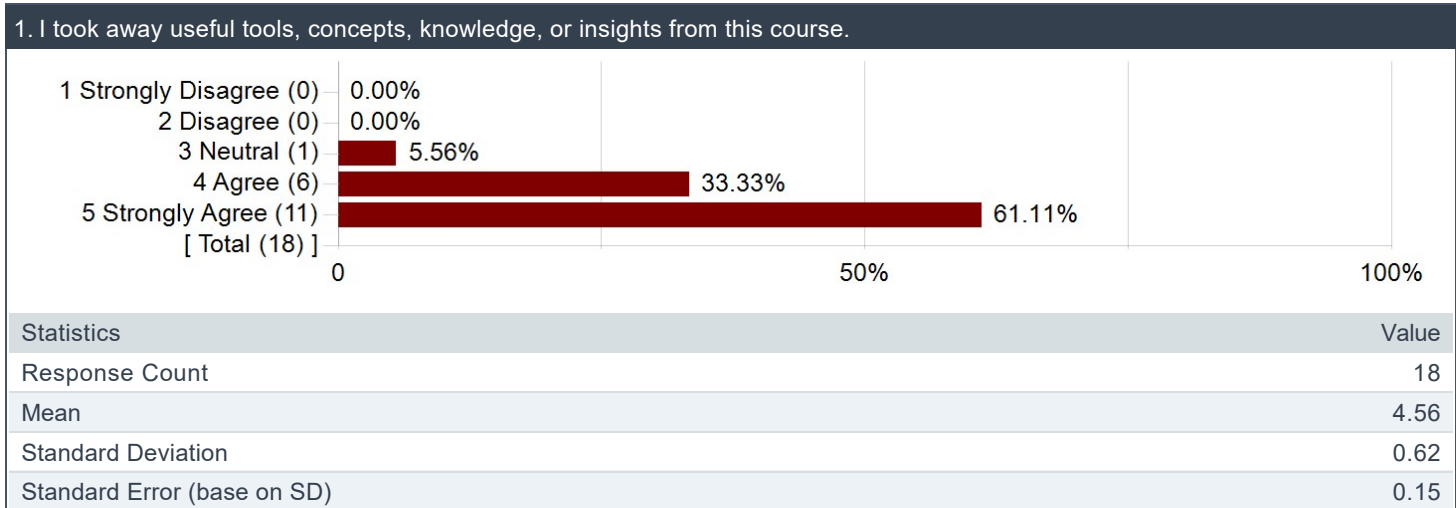
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Creation Date: **Wednesday, June 21, 2023**

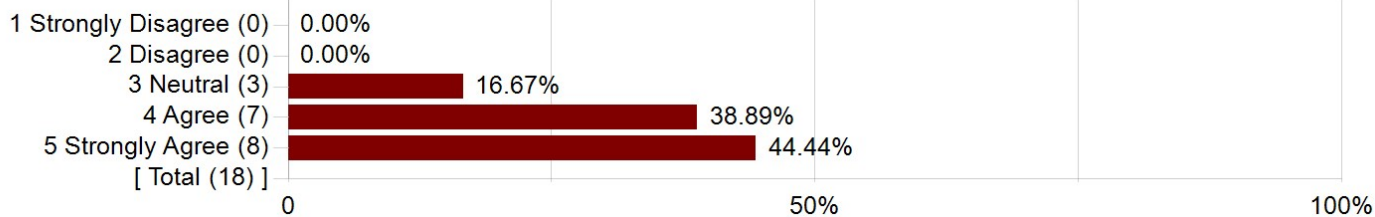
**Please review and evaluate your work in this course overall.**

Comments
this course was challenging but I really enjoyed it
We had a brief review of statistics and econometrics (through instrumental variables) and moved straight onto ML methods. Variable selection , Lasso, Double Lasso, Dantzig Selector, principal component analysis, principal component regression, dynamic factors models, non parametric and non linear models, kernel estimation, series estimation, curse of dimensionality, regression trees, bootstrap, bagging, random forest, causal forests, neural networks, double machine learning. Along the way, we look at relevant theorems proved by these results, asymptotic behavior of these estimators, and MANY examples.
I learned a lot about various machine learning methods (Lasso and variants, non-parametric inference, trees, forests, boosting, neural networks, double ML) in this class and how they can be applied in economic settings and for economics research.
This course provides a comprehensive survey of classical econometric methods, and then delves into why machine learning has gained popularity among economists.
Kirill has done a great job in explaining a broad range of topics, and overall I've developed an understanding of not just machine learning but a history of why we should care.
very challenging course (probably the hardest class I have taken as an undergrad), but was definitely pushed to learned a lot. I tried my best

**Please review and evaluate the course on the following:**

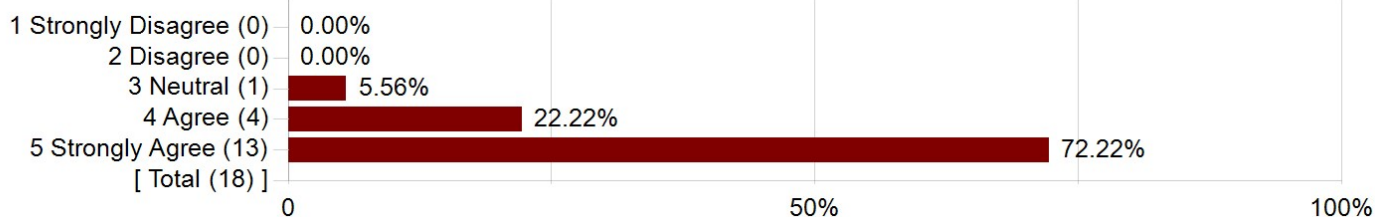


3. I would recommend this course to other students.



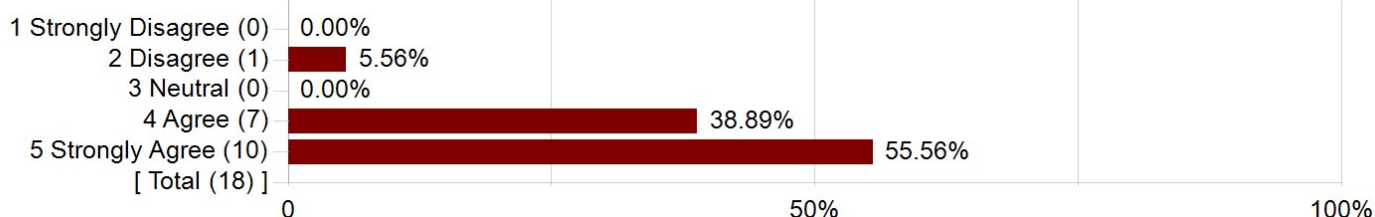
Statistics	Value
Response Count	18
Mean	4.28
Standard Deviation	0.75
Standard Error (base on SD)	0.18

4. The material in this course was constructively challenging.



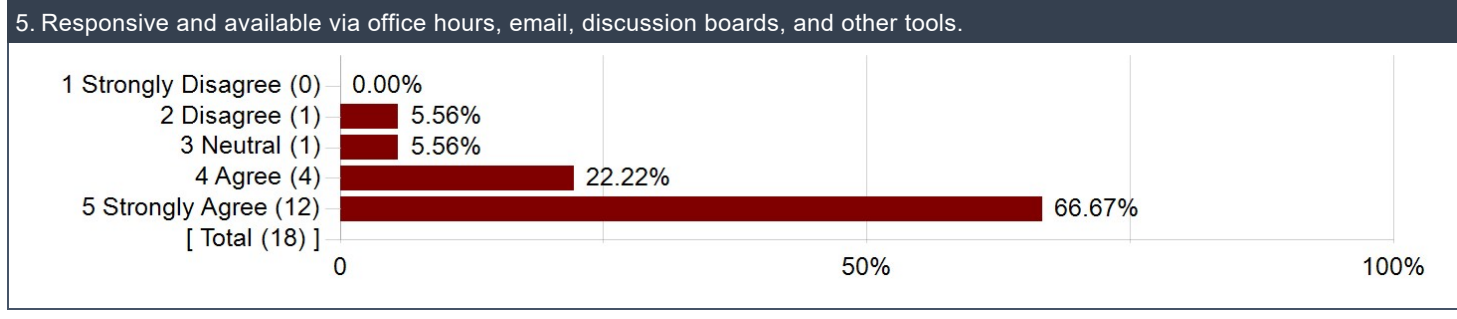
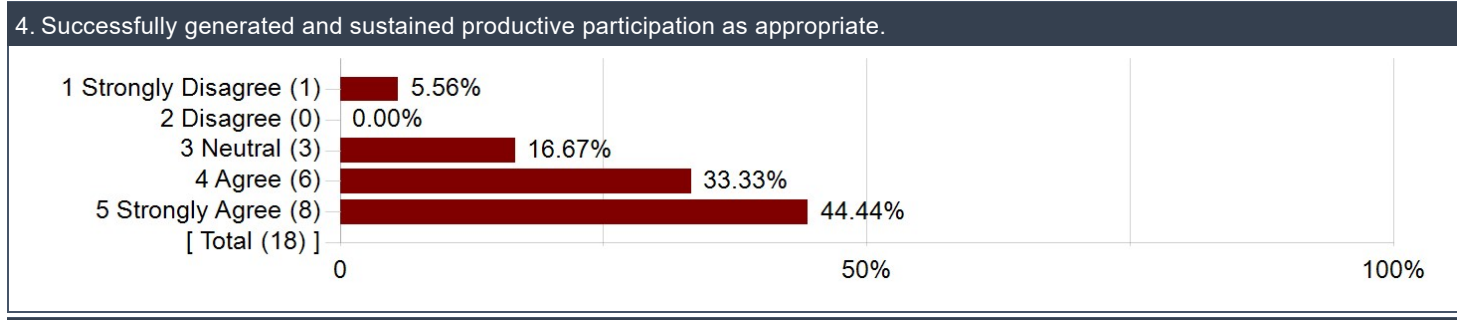
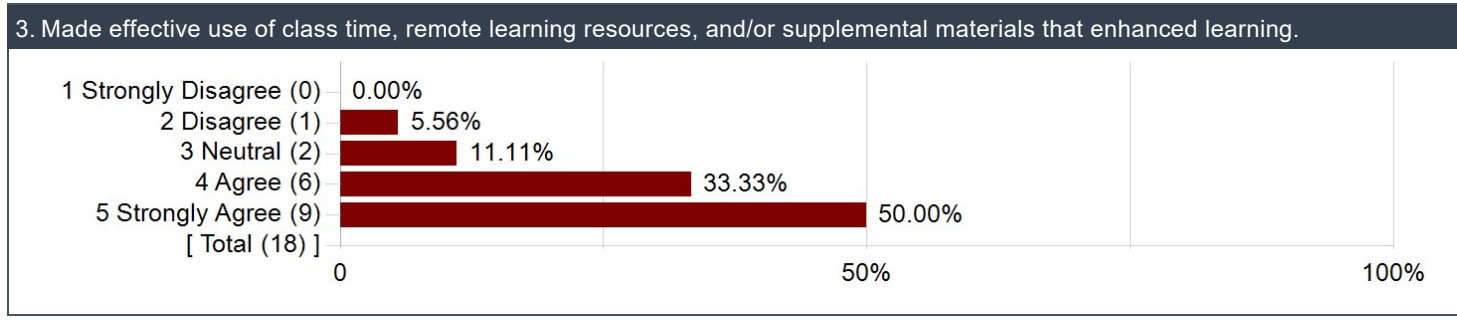
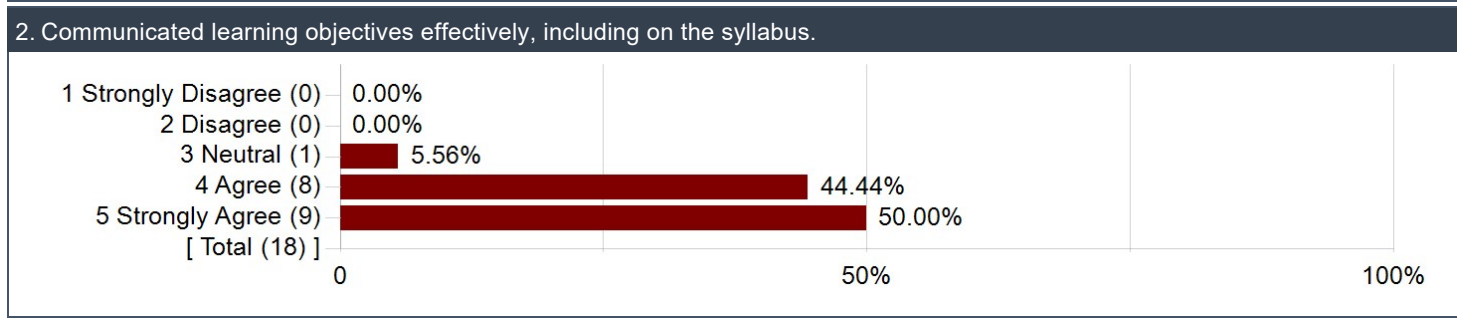
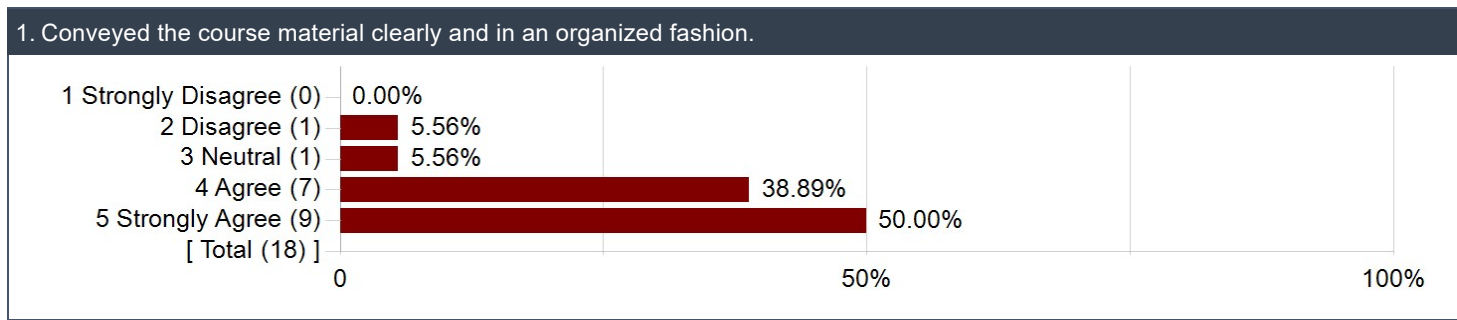
Statistics	Value
Response Count	18
Mean	4.67
Standard Deviation	0.59
Standard Error (base on SD)	0.14

5. I felt that the classroom was an inclusive learning environment for me.



Statistics	Value
Response Count	18
Mean	4.44
Standard Deviation	0.78
Standard Error (base on SD)	0.18

Please review and evaluate the faculty on the following:



## Please elaborate on any of your responses above.

Comments
Lectures were very advanced but the professor did a good job explaining very challenging concepts
Problem sets were difficult. Think of bowling without the barriers. The problem sets did not have these barriers, and consequently it was possible to become very lost trying to parse errors and figure out how packages work.
Kirill did not waste a single moment of the class. Every minute that could be used was used to cover content. He was a fantastic lecturer and explained concepts very clearly, knowing where to abstract away from the tedious math while also providing insight into the mechanics of various estimators.

## What aspects of the instructor's teaching contributed most and least to your learning?

Comments
Most: very clear and I can always get answers to my questions Least: can't really see what's on the blackboard
Organized notes, lectures with efficient delivery of the material
Most: office hours and flexibility and posting lecture notes Least: lectures moved fast sometimes and did not always help with success on assignments
Kirill is a really clear, efficient lecturer. He moves quickly and covers a lot in class. His answers to questions (both in class and in office hours) were clear and very helpful.
Lectures
Kirill is highly knowledgeable and discusses a broad range of topics in the course. The pacing can be a bit fast depending on the student's background (see below), but for me it was fine.
Prof Ponomarev is very organized and good at lecturing hard topics.

## Please suggest any changes that could improve this course (e.g., class material, class structure, assignments, inclusive pedagogy).

Comments
Maybe post the slides before class
I wish we could get grades faster to have a chance to reflect on the results, but this is more of a TA's or grader's responsibility
Shorter and more frequent assignments
Perhaps a bit more guidance could be given on the problem sets. It was very easy to get lost in litanies of code errors, which while valuable for debugging, distracted from the relevant elements of the course.
Coming into the class with already some background in machine learning and econometric theory, the course pacing and structure was perfect for me as it focused more on a big-picture survey of why machine learning has gained popularity among economists rather than specific models/algorithms. Many of the topics in the first half of the course (e.g. factor models and classical non-parametrics) were new to me, and helped provide context around why we should care about machine learning in economics.
Students who have had at least some exposure to machine learning and econometrics are likely the ones to benefit the most from the course, and I think this should be emphasized in the course description and syllabus (maybe even formal prerequisites). For other students who maybe have not had this exposure, it is certainly possible to keep up – though I'd expect that it might be challenging or impossible to fully understand the "why" behind what we are learning. For these students, I think it is actually possible that they finish the course without really understanding what machine learning is despite the course title.
psets were hard!

## Please comment on how respected, valued, and included you felt as a participant in the course.

Comments
very respected, valued, and included
Overall great
I felt very respected and values, and the professor did an excellent job creating an inclusive environment
Highly
respected

Please include the name of the TA you are evaluating. What aspects of the TA's teaching contributed most to your learning? What could the TA modify to help you learn more? Please include any additional feedback for the TA.

Comments
Ian Pitman, Nice code demonstrations
He was wonderful and easy to talk
Ian Pitman. Overall great and TA sessions are useful, I only wish that grading would be faster
Ian Pitman
Ian Pitman was responsive to emails and helpful in providing feedback
Ian is very supportive and helpful for our learning and assignments
Ian Pitman. Very helpful during office Hours
Ian Pitman. In discussion sections, Ian would go through examples how to implement the estimators we learned in class. His office hours were very helpful, and his explanations were clear. He was clearly very knowledgeable about the subject.
Ian. He was very helpful during TA sessions and responsive via email.
Ian Pitman. Overall a great TA. While I did not have many interactions with Ian besides the final few classes, his feedback during presentations and homework assignments were very helpful.
Ian. Very nice and available to help during OH and discussion sections!