



D) Short summary: This course aims to introduce machine learning (ML) based methods that are useful in addressing economic issues. The similarities and differences between the econometric toolkit and ML methods is emphasized. New methods at the intersection of econometrics and ML that help us answer economic questions is discussed. In addition, students also gain hands-on experience in applying ML methods on real economic data sets, through software demonstration lectures and programming assignments.

7. Recommended books:

1. James, Witten, Hastie, Tibshirani. An Introduction to Statistical Learning, 2013. Available online at <https://www-bcf.usc.edu/~gareth/ISL/ISLR>
2. Hastie, Tibshirani, and Friedman. The Elements of Statistical Learning. Available online at <https://web.stanford.edu/hastie/Papers/ESLII.pdf>
3. Athey, Susan. "The impact of machine learning on economics." The economics of artificial intelligence: An agenda. University of Chicago Press, 2018.
4. Venables, Smith, and the R Core Team. An Introduction to R. Available online at <https://cran.r-project.org/doc/manuals/R-intro.pdf>
5. Varian. Big Data: New Tricks for Econometrics. Journal of Economic Perspectives, 3-27.

Dated: 16.09.2021

Proposer: Thirumulanathan D

Dated: \_\_\_\_\_

DPGC Convener: \_\_\_\_\_

The course is approved / not approved

Chairperson, SPGC Dated: \_\_\_\_\_