

ECE 174: Introduction to Linear and Nonlinear Optimization  
Fall 2019

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**Homework # 4 (Effort-Only)**  
**Due: Thursday, December 5, in class**

**Collaboration and Grading Policy:** This homework set is “effort only”. All students who attempt all the problems and show effort towards solving them will receive full credit (regardless of the final answer). It also allows limited collaboration between students. You are expected to try to solve the problems on your own. You may discuss a problem with other students to clarify any doubts, but you must fully understand the solution that you turn in and write it up entirely on your own. Blindly copying the answer from any resource (e.g. your friend, the internet) will be considered a violation of academic integrity and will be duly reported. \*

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1. **Reading.** Chapters 14 and 15 of the textbook.
2. **More on Least-squares based multi-class classifier:** Solve Problem 14.4 from the textbook.
3. **Multi-objective and Regularized Least Squares:** Solve Problems 15.1, 15.2, 15.3 and 15.10 from the textbook.

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\*For more information on Academic Integrity Policies at UCSD, please visit <http://academicintegrity.ucsd.edu/excel-integrity/define-cheating/index.html>