

LEARNING OBJECTIVES - Lecture 4 (Basic Inequalities with Information Measures)

After attending lecture and completing the associated readings, you should be able to:

1. Derive the relationship between entropy and mutual information.
2. Derive chain rules for entropy, relative entropy, and mutual information.
3. State and prove Jensen's inequality.
4. State and prove the log-sum inequality.
5. State and prove the data processing inequality.
6. Describe sufficient statistics.
7. State and prove Fano's inequality.