

Information Theory, Part II

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This document contains lecture notes from Harker's Advanced Topics in Mathematics class in Information Theory II, taught by Dr. Anuradha Aiyer. This course is the second part of a two part offering that explores the basic concepts of Information Theory, as initially described by Claude Elwood Shannon at Bell Labs in 1948. In Part 2 of the course, we explore other applications of Information Theory – specifically to the disciplines of Gambling, Statistics, Physics, Computer science, Economics and Philosophy. These notes were taken using TeXShop and L^AT_EX₂ ϵ and will be updated for each class. The reader is advised to note any errata at the source control repository <https://github.com/mananshah99/infotheory>.

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1 Unit 1: Gambling

Appendix A—Quotes