

MACHINE LEARNING

ERNEST YEUNG ERNESTYALUMNI@GMAIL.COM

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ABSTRACT. Everything about Machine Learning.

Part 1. Introduction

0.0.1. *Terminology.*

inputs \equiv independent variables \equiv predictors (cf. statistics) \equiv features (cf. pattern recognition)

outputs \equiv dependent variables \equiv responses

cf. Chapter 2 Overview of Supervised Learning, Section 2.1 Introduction of Hastie, Tibshirani, and Friedman (2009) [1]

cf. Chapter 2 Overview of Supervised Learning, Section 2.2 Variable Types and Terminology of Hastie, Tibshirani, and Friedman (2009) [1]

0.0.2. *FinSet.*

The category $\mathbf{FinSet} \in \mathbf{Cat}$ is the category of all finite sets (i.e. $\mathbf{Obj}(\mathbf{FinSet}) \equiv$ all finite sets) and all functions in between them;

note that $\mathbf{FinSet} \subset \mathbf{Set}$ ¹

Recall that the \mathbf{FinSet} *skeletal* is

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¹ \mathbf{nlab} \mathbf{FinSet} <https://ncatlab.org/nlab/show/FinSet>

REFERENCES

[1] Trevor Hastie, Robert Tibshirani, Jerome Friedman. **The Elements of Statistical Learning: Data Mining, Inference, and Prediction**, Second Edition (Springer Series in Statistics) 2nd ed. 2009. Corr. 7th printing 2013 Edition. ISBN-13: 978-0387848570. https://web.stanford.edu/~hastie/local.ftp/Springer/OLD/ESLII_print4.pdf