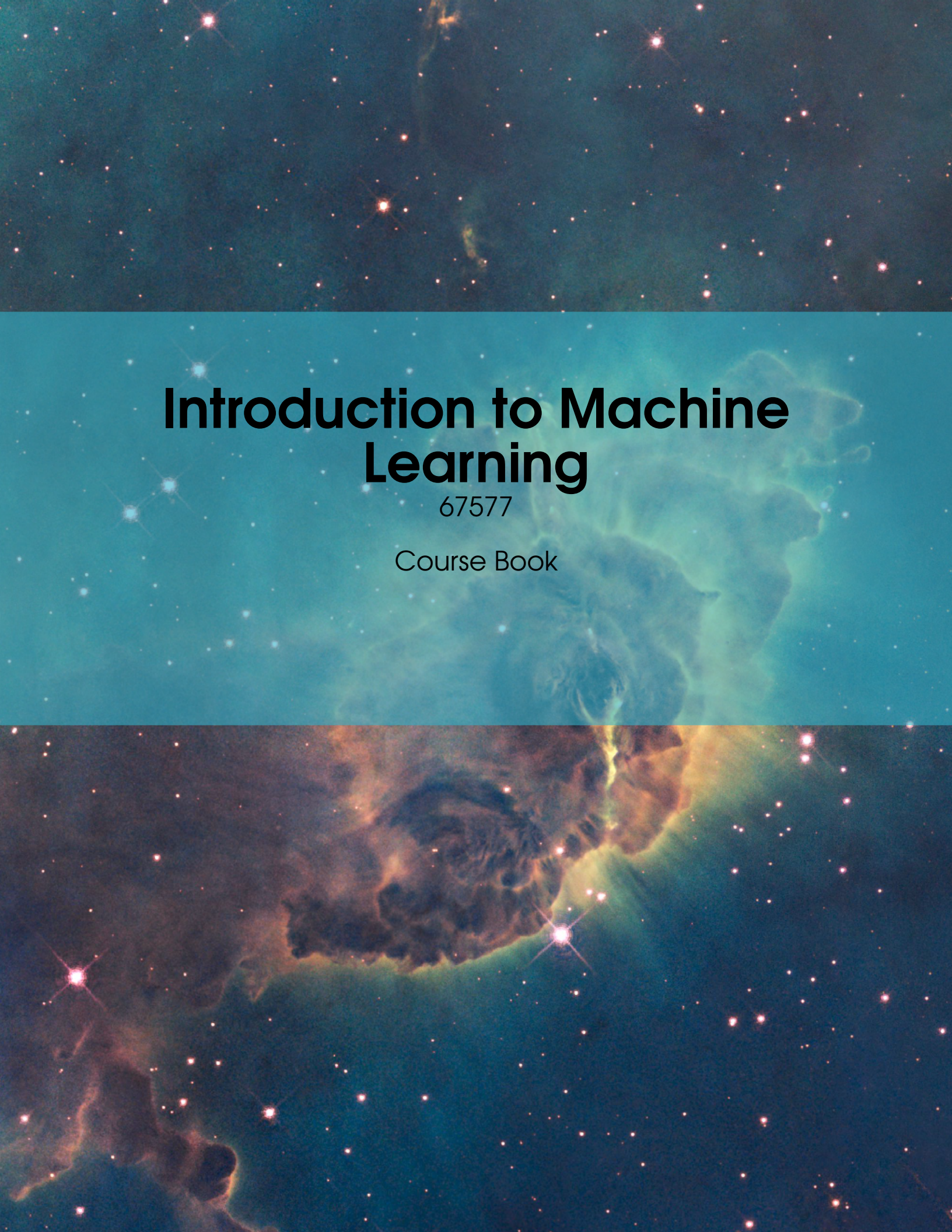

Introduction to Machine Learning

67577

Course Book

INTRODUCTION TO MACHINE LEARNING, THE HEBREW UNIVERSITY, JERUSALEM

ADDRESS TO CODE EXAMPLES AND LABS REPOSITORY

Written by and by.

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Contents

0.1 Preface

0.1.1 Notation

Table 1: Notation Summary

Symbol	Meaning
n	Number of samples
d, k	Number of features
$\mathscr{X}$	Domain set
$\mathscr{Y}$	Response set
$\mathscr{Z}$	$(\mathscr{X} \times \mathscr{Y})$ The product space of domain set and response set
$S = x_1, \ldots, x_n$	A sequence of samples from domain set
$S = z_1, \ldots, z_n$	A sequence of samples and corresponding responses from product space $\mathscr{Z}$

0.1.2 Data Sets Used in Book, Labs and Examples

1. Mathematical Basis

2. Introduction & Linear Regression

3. Classification

4. PAC Theory of Statistical Learning

5. Ensemble Methods

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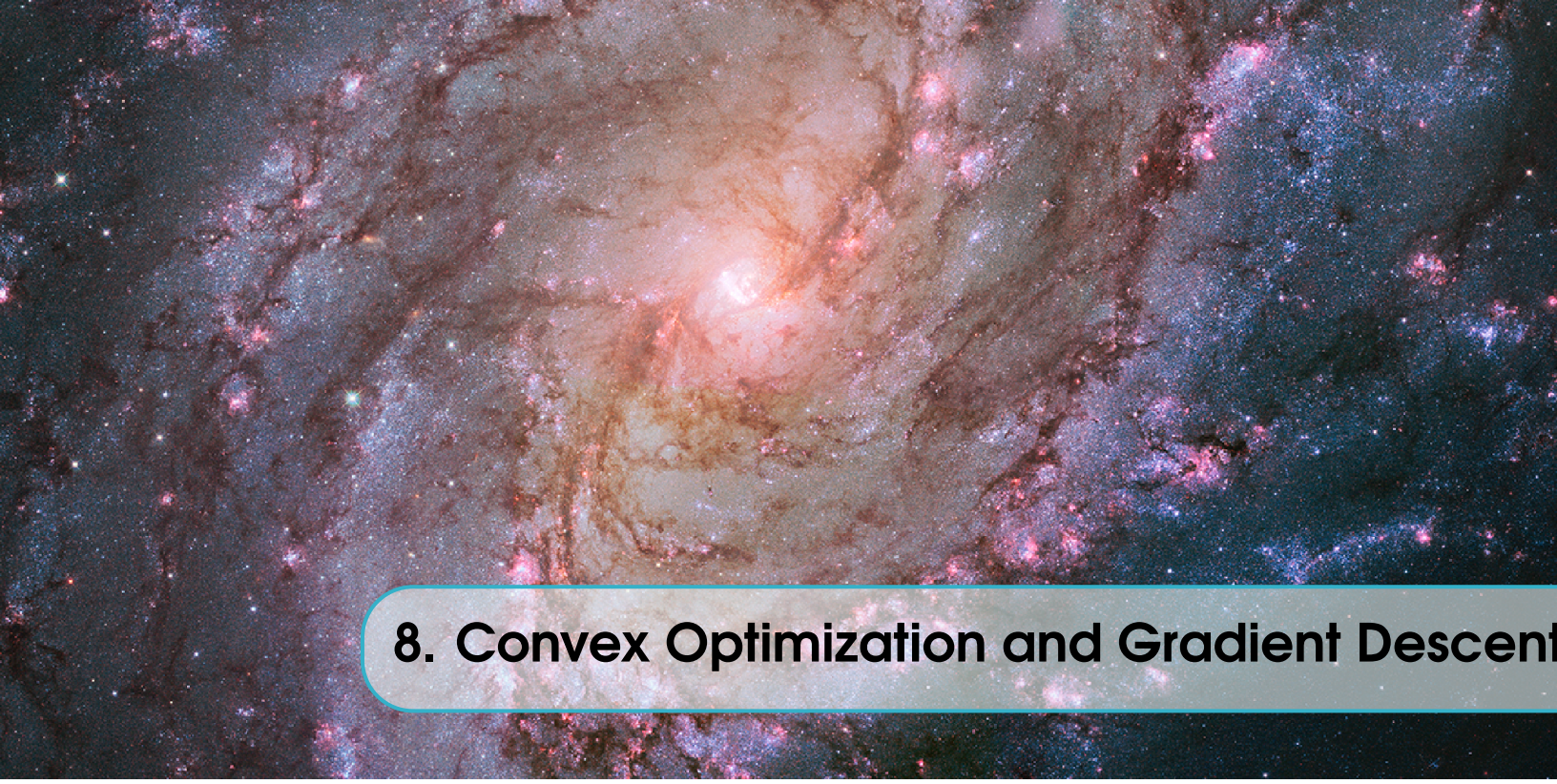

8. Convex Optimization and Gradient Descent

9. Online- and Reinforcement Learning

10. Deep Learning