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Prediction Machines

The Simple Economics of Artificial Intelligence

AJAY AGRAWAL | JOSHUA GANS | AVI GOLDFARB

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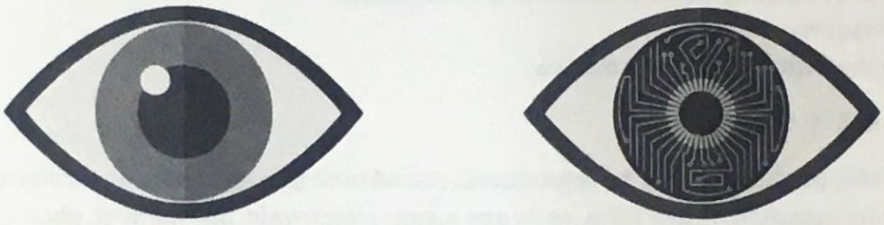
Prediction Machines



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Contents

Acknowledgments *ix*

1. Introduction: Machine Intelligence 1
2. Cheap Changes Everything 7

Part One: Prediction

3. Prediction Machine Magic 23
4. Why It's Called Intelligence 31
5. Data Is the New Oil 43
6. The New Division of Labor 53

Part Two: Decision Making

7. Unpacking Decisions 73
8. The Value of Judgment 83
9. Predicting Judgment 95
10. Taming Complexity 103
11. Fully Automated Decision Making 111

Part Three: Tools

12. Deconstructing Work Flows 123
13. Decomposing Decisions 133
14. Job Redesign 141

Part Four: Strategy

15. AI in the C-Suite 155
16. When AI Transforms Your Business 167
17. Your Learning Strategy 179
18. Managing AI Risk 195

Part Five: Society

19. Beyond Business 209

Notes 225
Index 239
About the Authors 249

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1

Introduction

Machine Intelligence

If the following scenario doesn't already sound familiar, then it will soon. A kid is doing homework alone in another room. You hear a question, "What's the capital of Delaware?" The parent starts thinking: *Baltimore . . . too obvious . . . Wilmington . . . not a capital.* But before the thought is complete, a machine called Alexa says the correct answer: "The capital of Delaware is Dover." Alexa is Amazon's artificial intelligence, or AI, that interprets natural language and provides answers to questions at lightning speed. Alexa has replaced the parent as the all-knowing source of information in the eyes of a child.

AI is everywhere. It's in our phones, cars, shopping experiences, romantic matchmaking, hospitals, banks, and all over the media. No wonder corporate directors, CEOs, vice presidents, managers, team leaders, entrepreneurs, investors, coaches, and policy makers are anxiously racing to learn about AI: they all realize it is about to fundamentally change their businesses.

The three of us have observed the advances in AI from a distinctive vantage point. We are economists who built our careers studying the