

PYTHON

for

MBA_s



MATTAN GRIFFEL
and DANIEL GUETTA



Columbia University Press

Publishers Since 1893

New York Chichester, West Sussex

cup.columbia.edu

Copyright © 2021 Mattan Griffel and Daniel Guetta

All rights reserved

Library of Congress Cataloging-in-Publication Data

Names: Griffel, Mattan, author. | Guetta, Daniel, author.

Title: Python for MBAs / Mattan Griffel and Daniel Guetta.

Description: New York : Columbia University Press, [2021] | Includes index.

Identifiers: LCCN 2020032750 (print) | LCCN 2020032751 (ebook) | ISBN
9780231193924 (hardback) | ISBN 9780231193931 (trade paperback) | ISBN
9780231550574 (ebook)

Subjects: LCSH: Python (Computer program language) | Business--Data
processing.

Classification: LCC QA76.73.P98 G77 2021 (print) | LCC QA76.73.P98
(ebook) | DDC 005.13/3—dc23

LC record available at <https://lcn.loc.gov/2020032750>

LC ebook record available at <https://lcn.loc.gov/2020032751>



Columbia University Press books are printed on permanent
and durable acid-free paper.

Printed in the United States of America

Cover design: Noah Arlow

CONTENTS

INTRODUCTION 1

PART 1

1 GETTING STARTED WITH PYTHON 9

- 1.1 What You'll Learn in This Chapter 9
- 1.2 Introduction to Programming Using Python 9
- 1.3 Setting Up Your Development Environment 17
- 1.4 Command Line Basics 21
- 1.5 It's Time for Happy Hour 27
- 1.6 Wrapping Up 38

2 PYTHON BASICS, PART 1 39

- 2.1 What You'll Learn in This Chapter 39
- 2.2 Two Ways of Running Python Code 39
- 2.3 Printing 42
- 2.4 Debugging Errors and Googling 44
- 2.5 Comments 50
- 2.6 Variables 52

VI CONTENTS

2.7	Numbers and Math	54
2.8	Strings	60
2.9	Getting User Input	66
2.10	Wrapping Up	70
3	PYTHON BASICS, PART 2	71
3.1	What You'll Learn in This Chapter	71
3.2	Conditional Statements	71
3.3	Logic in Python	78
3.4	Making if.py Case Insensitive	83
3.5	Lists	88
3.6	Looping Over Lists	94
3.7	FizzBuzz	101
3.8	Dictionaries	107
3.9	Wrapping Up	115
4	PYTHON BASICS, PART 3	116
4.1	What You'll Learn in This Chapter	116
4.2	Introduction to Functions	117
4.3	Importing Python Packages	137
4.4	Wrapping Up	142
4.5	End of Part 1	143
PART 2		
<hr/>		
5	INTRODUCTION TO DATA IN PYTHON	145
5.1	What You'll Learn in This Chapter	148
5.2	What You'll Need for This Chapter	149
5.3	An Introduction to <i>Jupyter Notebook</i>	149
5.4	The Data	170
5.5	The pandas Library	172
5.6	Reading and Writing Data	185
5.7	Column Types	189
5.8	Wrapping Up	192

6 EXPLORING, PLOTTING, AND MODIFYING DATA IN PYTHON 193

- 6.1 What You'll Learn in This Chapter 193
- 6.2 What You'll Need for This Chapter 194
- 6.3 Sorting Data in pandas 194
- 6.4 Plotting Data in pandas 198
- 6.5 Exploring Data in pandas 200
- 6.6 Filtering DataFrames 213
- 6.7 Operating on Columns 215
- 6.8 Editing DataFrames 237
- 6.9 More Practice 241
- 6.10 Wrapping Up 251

7 BRINGING TOGETHER DATASETS 252

- 7.1 What You'll Learn in This Chapter 252
- 7.2 What You'll Need for This Chapter 253
- 7.3 Combining Datasets: An Introduction 253
- 7.4 Some Toy Datasets 255
- 7.5 The Five Types of Joins 257
- 7.6 Joins in pandas 262
- 7.7 Picking the Right Kind of Join 266
- 7.8 Primary Keys and Joins 270
- 7.9 Constructing the Dig Order Dataset 272
- 7.10 Wrapping Up 278

8 AGGREGATION 280

- 8.1 What You'll Learn in This Chapter 281
- 8.2 What You'll Need for This Chapter 281
- 8.3 The Basics of Aggregation 281
- 8.4 Calculations on Multiple Columns 291
- 8.5 More Complex Grouping 293
- 8.6 Wrapping Up 301

9 PRACTICE 302

- 9.1 What You'll Learn in This Chapter 302
- 9.2 What You'll Need for This Chapter 303

VIII CONTENTS

9.3	New Product Analytics: Creating Fertile Ground for Success	303
9.4	The Next Frontier: Designing Dig's Delivery-Specific Menu	306
9.5	Staffing for Success	313
9.6	Democratizing Data: The Summarized Order Dataset	316
9.7	Finding Fertile Ground for a New Delivery Service	320
9.8	Understanding Your Customers: Are Salad Eaters Healthier?	326
9.9	Orders and Weather	331
9.10	Wrapping Up	338

WHAT'S NEXT? 339

Notes 343

Index 347