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# Coding

ALL-IN-ONE

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Nikhil Abraham et al.



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ALL-IN-ONE

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## Coding All-in-One For Dummies®

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# Contents at a Glance

<b>Introduction</b>	1
<b>Book 1: Getting Started with Coding</b>	5
CHAPTER 1: What Is Coding?	7
CHAPTER 2: Programming for the Web	19
CHAPTER 3: Becoming a Programmer	33
<b>Book 2: Career Building with Coding</b>	43
CHAPTER 1: Exploring Coding Career Paths	45
CHAPTER 2: Exploring Undergraduate and Graduate Degrees	59
CHAPTER 3: Training on the Job	73
CHAPTER 4: Coding Career Myths	83
<b>Book 3: Basic Web Coding</b>	93
CHAPTER 1: Exploring Basic HTML	95
CHAPTER 2: Getting More Out of HTML	113
CHAPTER 3: Getting Stylish with CSS	129
CHAPTER 4: Next Steps with CSS	151
CHAPTER 5: Building Floating Page Layouts	173
CHAPTER 6: Using Alternative Positioning	201
<b>Book 4: Advanced Web Coding</b>	231
CHAPTER 1: Working Faster with Twitter Bootstrap	233
CHAPTER 2: Adding in JavaScript	249
CHAPTER 3: Understanding Callbacks and Closures	269
CHAPTER 4: Embracing AJAX and JSON	279
CHAPTER 5: jQuery	295
<b>Book 5: Creating Web Applications</b>	311
CHAPTER 1: Building Your Own App	313
CHAPTER 2: Researching Your First Web Application	325
CHAPTER 3: Coding and Debugging Your First Web Application	341
<b>Book 6: Selecting Data Analysis Tools</b>	351
CHAPTER 1: Wrapping Your Head around Python	353
CHAPTER 2: Installing a Python Distribution	367
CHAPTER 3: Working with Real Data	387

<b>Book 7: Evaluating Data</b> .....	405
CHAPTER 1: Conditioning Your Data .....	407
CHAPTER 2: Shaping Data .....	433
CHAPTER 3: Getting a Crash Course in Matplotlib .....	451
CHAPTER 4: Visualizing the Data .....	467
CHAPTER 5: Exploring Data Analysis .....	489
CHAPTER 6: Exploring Four Simple and Effective Algorithms .....	511
 <b>Book 8: Essentials of Machine Learning</b> .....	527
CHAPTER 1: Introducing How Machines Learn .....	529
CHAPTER 2: Demystifying the Math behind Machine Learning .....	553
CHAPTER 3: Descending the Right Curve .....	571
CHAPTER 4: Validating Machine Learning .....	585
 <b>Book 9: Applying Machine Learning</b> .....	603
CHAPTER 1: Starting with Simple Learners .....	605
CHAPTER 2: Leveraging Similarity .....	623
CHAPTER 3: Hitting Complexity with Neural Networks .....	643
CHAPTER 4: Resorting to Ensembles of Learners .....	661
CHAPTER 5: Real-World Applications .....	677
 <b>Index</b> .....	725



# Table of Contents

<b>INTRODUCTION</b>	1
About This Book	2
Foolish Assumptions	2
Icons Used in This Book	3
Beyond the Book	4
Where to Go from Here	4
<b>BOOK 1: GETTING STARTED WITH CODING</b>	5
<b>CHAPTER 1: What Is Coding?</b>	7
Defining What Code Is	8
Following instructions	8
Writing code with some Angry Birds	9
Understanding What Coding Can Do for You	9
Eating the world with software	10
Coding on the job	11
Scratching your own itch (and becoming rich and famous)	12
Surveying the Types of Programming Languages	13
Comparing low-level and high-level programming languages	14
Contrasting compiled code and interpreted code	15
Programming for the web	16
Taking a Tour of a Web App Built with Code	16
Defining the app's purpose and scope	16
Standing on the shoulders of giants	17
<b>CHAPTER 2: Programming for the Web</b>	19
Displaying Web Pages on Your Desktop and Mobile Device	20
Hacking your favorite news website	20
Understanding how the World Wide Web works	23
Watching out for your front end and back end	24
Defining web and mobile applications	25
Coding Web Applications	26
Starting with HTML, CSS, and JavaScript	26
Adding logic with Python, Ruby, or PHP	27
Coding Mobile Applications	28
Building mobile web apps	29
Building native mobile apps	30

<b>CHAPTER 3: Becoming a Programmer</b>	33
Writing Code Using a Process	33
Researching what you want to build	35
Designing your app	36
Coding your app	37
Debugging your code	38
Picking Tools for the Job	38
Working offline	39
Working online with Codecademy.com	39
 <b>BOOK 2: CAREER BUILDING WITH CODING</b>	 43
<b>CHAPTER 1: Exploring Coding Career Paths</b>	45
Augmenting Your Existing Job	46
Creative design	46
Content and editorial	47
Human resources	48
Product management	49
Sales and marketing	50
Legal	51
Finding a New Coding Job	52
Front-end web development	53
Back-end web development	54
Mobile application development	56
Data analysis	57
 <b>CHAPTER 2: Exploring Undergraduate and Graduate Degrees</b>	 59
Getting a College Degree	60
College computer science curriculum	60
Doing extracurricular activities	61
Two-year versus four-year school	64
Enrolling in an Advanced Degree Program	65
Graduate school computer science curriculum	66
Performing research	68
Interning to Build Credibility	68
Types of internship programs	69
Securing an internship	71
 <b>CHAPTER 3: Training on the Job</b>	 73
Taking a Work Project to the Next Level	74
Learning on the Job and after Work	75
Training on the job	76
Learning after work	77
Freelancing to Build Confidence and Skills	79

Transitioning to a New Role . . . . .	80
Assessing your current role . . . . .	81
Networking with developers . . . . .	81
Identifying roles that match your interest and skills . . . . .	82
<b>CHAPTER 4: Coding Career Myths . . . . .</b>	<b>83</b>
Educational Myths . . . . .	83
You must be good at math. . . . .	84
You must have studied engineering . . . . .	84
You can learn coding in a few weeks . . . . .	85
You need a great idea to start coding . . . . .	85
Ruby is better than Python . . . . .	86
Career Myths . . . . .	87
Only college graduates receive coding offers . . . . .	87
You must have experience. . . . .	88
Tech companies don't hire women or minorities. . . . .	89
The highest paying coding jobs are in San Francisco. . . . .	90
Your previous experience isn't relevant. . . . .	91
<b>BOOK 3: BASIC WEB CODING . . . . .</b>	<b>93</b>
<b>CHAPTER 1: Exploring Basic HTML . . . . .</b>	<b>95</b>
What Does HTML Do? . . . . .	95
Understanding HTML Structure . . . . .	96
Identifying elements . . . . .	97
Featuring your best attribute. . . . .	98
Standing head, title, and body above the rest . . . . .	100
Getting Familiar with Common HTML Tasks and Tags . . . . .	102
Writing headlines. . . . .	103
Organizing text in paragraphs. . . . .	104
Linking to your (heart's) content . . . . .	104
Adding images . . . . .	106
Styling Me Pretty . . . . .	107
Highlighting with bold, italics, underline, and strikethrough . . . . .	107
Raising and lowering text with superscript and subscript. . . . .	108
Building Your First Website Using HTML . . . . .	109
<b>CHAPTER 2: Getting More Out of HTML . . . . .</b>	<b>113</b>
Organizing Content on the Page . . . . .	113
Listing Data. . . . .	115
Creating ordered and unordered lists . . . . .	116
Nesting lists . . . . .	117

Putting Data in Tables . . . . .	118
Basic table structuring . . . . .	118
Stretching table columns and rows . . . . .	120
Aligning tables and cells . . . . .	121
Filling Out Forms . . . . .	124
Understanding how forms work . . . . .	125
Creating basic forms . . . . .	126
Practicing More with HTML . . . . .	127
<b>CHAPTER 3: Getting Stylish with CSS . . . . .</b>	<b>129</b>
What Does CSS Do? . . . . .	129
CSS Structure . . . . .	131
Choosing the element to style . . . . .	131
My property has value . . . . .	133
Hacking the CSS on your favorite website . . . . .	133
Common CSS Tasks and Selectors . . . . .	135
Font gymnastics: Size, color, style, family, and decoration . . . . .	135
Customizing links . . . . .	139
Adding background images and styling foreground images . . . . .	142
Styling Me Pretty . . . . .	146
Adding CSS to your HTML . . . . .	146
Building your first web page . . . . .	148
<b>CHAPTER 4: Next Steps with CSS . . . . .</b>	<b>151</b>
Styling (More) Elements on Your Page . . . . .	152
Styling lists . . . . .	152
Designing tables . . . . .	155
Selecting Elements to Style . . . . .	157
Styling specific elements . . . . .	158
Naming HTML elements . . . . .	161
Aligning and Laying Out Your Elements . . . . .	163
Organizing data on the page . . . . .	163
Shaping the div . . . . .	165
Understanding the box model . . . . .	167
Positioning the boxes . . . . .	169
Writing More Advanced CSS . . . . .	172
<b>CHAPTER 5: Building Floating Page Layouts . . . . .</b>	<b>173</b>
Creating a Basic Two-Column Design . . . . .	173
Designing the page . . . . .	173
Building the HTML . . . . .	175
Using temporary background colors . . . . .	177
Setting up the floating columns . . . . .	179
Tuning up the borders . . . . .	180

Advantages of a fluid layout. . . . .	181
Using semantic tags . . . . .	182
Building a Three-Column Design. . . . .	185
Styling the three-column page . . . . .	186
Problems with the floating layout. . . . .	188
Specifying a min-height . . . . .	189
Using height and overflow . . . . .	191
Building a Fixed-Width Layout. . . . .	193
Setting up the HTML . . . . .	193
Fixing the width with CSS . . . . .	194
Building a Centered Fixed-Width Layout . . . . .	196
Making a surrogate body with an all div . . . . .	197
How the jello layout works. . . . .	198
Limitations of the jello layout . . . . .	199
<b>CHAPTER 6: Using Alternative Positioning . . . . .</b>	<b>201</b>
Working with Absolute Positioning. . . . .	201
Setting up the HTML . . . . .	202
Adding position guidelines. . . . .	203
Making absolute positioning work . . . . .	204
Managing z-index . . . . .	206
Handling depth . . . . .	206
Working with z-index. . . . .	207
Building a Page Layout with Absolute Positioning . . . . .	208
Overview of absolute layout . . . . .	209
Writing the HTML. . . . .	210
Adding the CSS. . . . .	210
Creating a More Flexible Layout . . . . .	212
Designing with percentages. . . . .	213
Building the layout . . . . .	215
Exploring Other Types of Positioning. . . . .	216
Creating a fixed menu system. . . . .	216
Setting up the HTML . . . . .	218
Setting the CSS values. . . . .	219
Flexible Box Layout Model . . . . .	221
Creating a flexible box layout . . . . .	222
Viewing a flexible box layout . . . . .	223
... And now for a little reality . . . . .	225
<b>BOOK 4: ADVANCED WEB CODING . . . . .</b>	<b>231</b>
<b>CHAPTER 1: Working Faster with Twitter Bootstrap . . . . .</b>	<b>233</b>
Figuring Out What Bootstrap Does. . . . .	234
Installing Bootstrap. . . . .	235

Understanding the Layout Options . . . . .	236
Lining up on the grid system . . . . .	236
Dragging and dropping to a website . . . . .	239
Using predefined templates . . . . .	240
Adapting layout for mobile, tablet, and desktop . . . . .	241
Coding Basic Web Page Elements . . . . .	243
Designing buttons . . . . .	243
Navigating with toolbars . . . . .	244
Adding icons . . . . .	246
Build the Airbnb Home Page . . . . .	247
<b>CHAPTER 2: Adding in JavaScript . . . . .</b>	<b>249</b>
What Does JavaScript Do? . . . . .	249
Understanding JavaScript Structure . . . . .	251
Using semicolons, quotes, parentheses, and braces . . . . .	252
Coding Common JavaScript Tasks . . . . .	253
Storing data with variables . . . . .	253
Making decisions with if-else statements . . . . .	254
Working with string and number methods . . . . .	258
Alerting users and prompting them for input . . . . .	259
Naming code with functions . . . . .	260
Adding JavaScript to the web page . . . . .	261
Writing Your First JavaScript Program . . . . .	263
Working with APIs . . . . .	263
What do APIs do? . . . . .	264
Scraping data without an API . . . . .	266
Researching and choosing an API . . . . .	267
Using JavaScript Libraries . . . . .	267
jQuery . . . . .	267
D3.js . . . . .	268
<b>CHAPTER 3: Understanding Callbacks and Closures . . . . .</b>	<b>269</b>
What Are Callbacks? . . . . .	269
Passing functions as arguments . . . . .	270
Writing functions with callbacks . . . . .	270
Using named callback functions . . . . .	271
Understanding Closures . . . . .	274
Using Closures . . . . .	277
<b>CHAPTER 4: Embracing AJAX and JSON . . . . .</b>	<b>279</b>
Working behind the Scenes with AJAX . . . . .	279
AJAX examples . . . . .	280
Viewing AJAX in action . . . . .	282
Using the XMLHttpRequest object . . . . .	285

Working with the same-origin policy . . . . .	287
Using CORS, the silver bullet for AJAX requests . . . . .	288
Putting Objects in Motion with JSON . . . . .	289
<b>CHAPTER 5: jQuery . . . . .</b>	<b>295</b>
Writing More and Doing Less . . . . .	295
Getting Started with jQuery . . . . .	296
The jQuery Object . . . . .	297
Is Your Document Ready? . . . . .	298
Using jQuery Selectors . . . . .	298
Changing Things with jQuery. . . . .	300
Getting and setting attributes . . . . .	300
Changing CSS . . . . .	300
Manipulating elements in the DOM . . . . .	301
Events . . . . .	302
Using on() to attach events . . . . .	302
Detaching with off(). . . . .	304
Binding to events that don't exist yet. . . . .	304
Other event methods . . . . .	305
Effects . . . . .	305
Basic effects . . . . .	306
Fading effects. . . . .	306
Sliding effects. . . . .	306
Setting arguments for animation methods . . . . .	307
Custom effects with animate(). . . . .	307
Playing with jQuery animations. . . . .	308
AJAX . . . . .	309
Using the ajax() method . . . . .	309
Shorthand AJAX methods. . . . .	310
<b>BOOK 5: CREATING WEB APPLICATIONS . . . . .</b>	<b>311</b>
<b>CHAPTER 1: Building Your Own App . . . . .</b>	<b>313</b>
Building a Location-Based Offer App . . . . .	313
Understanding the situation . . . . .	314
Plotting your next steps . . . . .	314
Following an App Development Process . . . . .	315
Planning Your First Web Application . . . . .	316
Exploring the Overall Process . . . . .	317
Meeting the People Who Bring a Web App to Life . . . . .	319
Creating with designers . . . . .	319
Coding with front- and back-end developers . . . . .	321
Managing with product managers . . . . .	322
Testing with quality assurance . . . . .	322

<b>CHAPTER 2:</b>	<b>Researching Your First Web Application</b>	325
	Dividing the App into Steps	326
	Finding your app's functionality	326
	Finding your app's functionality: My version	326
	Finding your app's form	328
	Finding your app's form: The McDuck's Offer App design	332
	Identifying Research Sources	333
	Researching the Steps in the McDuck's Offer App	335
	Choosing a Solution for Each Step	338
<b>CHAPTER 3:</b>	<b>Coding and Debugging Your First Web Application</b>	341
	Getting Ready to Code	342
	Coding Your First Web Application	342
	Development environment	343
	Prewritten code	343
	Coding steps for you to follow	347
	Debugging Your App	350
	<b>BOOK 6: SELECTING DATA ANALYSIS TOOLS</b>	351
<b>CHAPTER 1:</b>	<b>Wrapping Your Head around Python</b>	353
	What Does Python Do?	354
	Defining Python Structure	355
	Understanding the Zen of Python	355
	Styling and spacing	356
	Coding Common Python Tasks and Commands	357
	Defining data types and variables	357
	Computing simple and advanced math	358
	Using strings and special characters	360
	Deciding with conditionals: if, elif, else	361
	Input and output	362
	Shaping Your Strings	363
	Dot notation with upper(), lower(), capitalize(), and strip()	363
	String formatting with %	364
	Building a Simple Tip Calculator Using Python	365
<b>CHAPTER 2:</b>	<b>Installing a Python Distribution</b>	367
	Choosing a Python Distribution with Machine Learning in Mind	368
	Getting Continuum Analytics Anaconda	369
	Getting Enthought Canopy Express	370
	Getting Python(x,y)	371
	Getting WinPython	371



Installing Python on Linux .....	371
Installing Python on Mac OS X.....	372
Installing Python on Windows.....	374
Downloading the Data Sets and Example Code .....	378
Using Jupyter Notebook .....	378
Defining the code repository.....	379
Understanding the data sets used in this book .....	385
<b>CHAPTER 3: Working with Real Data .....</b>	<b>387</b>
Uploading, Streaming, and Sampling Data .....	388
Uploading small amounts of data into memory.....	388
Streaming large amounts of data into memory .....	390
Sampling data .....	391
Accessing Data in Structured Flat-File Form .....	392
Reading from a text file .....	393
Reading CSV delimited format.....	394
Reading Excel and other Microsoft Office files .....	396
Sending Data in Unstructured File Form .....	397
Managing Data from Relational Databases.....	400
Interacting with Data from NoSQL Databases .....	401
Accessing Data from the Web .....	402
<b>BOOK 7: EVALUATING DATA .....</b>	<b>405</b>
<b>CHAPTER 1: Conditioning Your Data .....</b>	<b>407</b>
Juggling between NumPy and pandas .....	408
Knowing when to use NumPy .....	408
Knowing when to use pandas .....	408
Validating Your Data .....	409
Figuring out what's in your data .....	410
Removing duplicates.....	411
Creating a data map and data plan .....	412
Manipulating Categorical Variables .....	414
Creating categorical variables .....	415
Renaming levels.....	417
Combining levels .....	417
Dealing with Dates in Your Data .....	419
Formatting date and time values .....	419
Using the right time transformation.....	420
Dealing with Missing Data .....	421
Finding the missing data .....	421
Encoding missingness.....	422
Imputing missing data .....	423

Slicing and Dicing: Filtering and Selecting Data .....	424
Slicing rows .....	424
Slicing columns .....	425
Dicing .....	426
Concatenating and Transforming .....	426
Adding new cases and variables .....	427
Removing data .....	428
Sorting and shuffling .....	429
Aggregating Data at Any Level .....	430
<b>CHAPTER 2: Shaping Data .....</b>	<b>433</b>
Working with HTML Pages .....	434
Parsing XML and HTML .....	434
Using XPath for data extraction .....	435
Working with Raw Text .....	436
Dealing with Unicode .....	436
Stemming and removing stop words .....	438
Introducing regular expressions .....	440
Using the Bag of Words Model and Beyond .....	442
Understanding the bag of words model .....	443
Working with n-grams .....	445
Implementing TF-IDF transformations .....	446
Working with Graph Data .....	447
Understanding the adjacency matrix .....	448
Using NetworkX basics .....	448
<b>CHAPTER 3: Getting a Crash Course in Matplotlib .....</b>	<b>451</b>
Starting with a Graph .....	452
Defining the plot .....	452
Drawing multiple lines and plots .....	453
Saving your work .....	454
Setting the Axis, Ticks, Grids .....	455
Getting the axes .....	455
Formatting the axes .....	456
Adding grids .....	457
Defining the Line Appearance .....	458
Working with line styles .....	458
Using colors .....	459
Adding markers .....	460
Using Labels, Annotations, and Legends .....	462
Adding labels .....	463
Annotating the chart .....	464
Creating a legend .....	465

<b>CHAPTER 4: Visualizing the Data</b>	467
Choosing the Right Graph	468
Showing parts of a whole with pie charts	468
Creating comparisons with bar charts	470
Showing distributions using histograms	471
Depicting groups using boxplots	472
Seeing data patterns using scatterplots	474
Creating Advanced Scatterplots	475
Depicting groups	476
Showing correlations	477
Plotting Time Series	478
Representing time on axes	478
Plotting trends over time	480
Plotting Geographical Data	481
Visualizing Graphs	483
Developing undirected graphs	484
Developing directed graphs	485
<b>CHAPTER 5: Exploring Data Analysis</b>	489
The EDA Approach	490
Defining Descriptive Statistics for Numeric Data	491
Measuring central tendency	492
Measuring variance and range	493
Working with percentiles	494
Defining measures of normality	494
Counting for Categorical Data	495
Understanding frequencies	496
Creating contingency tables	497
Creating Applied Visualization for EDA	498
Inspecting boxplots	498
Performing t-tests after boxplots	499
Observing parallel coordinates	500
Graphing distributions	501
Plotting scatterplots	502
Understanding Correlation	504
Using covariance and correlation	504
Using nonparametric correlation	507
Considering chi-square for tables	507
Modifying Data Distributions	508
Using the normal distribution	508
Creating a z-score standardization	509
Transforming other notable distributions	509

<b>CHAPTER 6:</b>	<b>Exploring Four Simple and Effective Algorithms...</b>	<b>511</b>
	Guessing the Number: Linear Regression .....	512
	Defining the family of linear models .....	512
	Using more variables .....	513
	Understanding limitations and problems .....	514
	Moving to Logistic Regression .....	515
	Applying logistic regression .....	516
	Considering when classes are more .....	517
	Making Things as Simple as Naïve Bayes .....	518
	Finding out that Naïve Bayes isn't so naïve .....	519
	Predicting text classifications .....	521
	Learning Lazily with Nearest Neighbors .....	522
	Predicting after observing neighbors .....	523
	Choosing your k parameter wisely .....	525
	 <b>BOOK 8: ESSENTIALS OF MACHINE LEARNING .....</b>	<b>527</b>
<b>CHAPTER 1:</b>	<b>Introducing How Machines Learn .....</b>	<b>529</b>
	Getting the Real Story about AI .....	530
	Moving beyond the hype .....	530
	Dreaming of electric sheep .....	532
	Overcoming AI fantasies .....	535
	Considering the relationship between AI and machine learning .....	538
	Considering AI and machine learning specifications .....	539
	Defining the divide between art and engineering .....	540
	Learning in the Age of Big Data .....	541
	Defining big data .....	542
	Considering the sources of big data .....	543
	Specifying the role of statistics in machine learning .....	546
	Understanding the role of algorithms .....	547
	Defining what training means .....	550
<b>CHAPTER 2:</b>	<b>Demystifying the Math behind Machine Learning .....</b>	<b>553</b>
	Working with Data .....	554
	Creating a matrix .....	556
	Understanding basic operations .....	558
	Performing matrix multiplication .....	558
	Glancing at advanced matrix operations .....	561
	Using vectorization effectively .....	561
	Exploring the World of Probabilities .....	563
	Operating on probabilities .....	564
	Conditioning chance by Bayes' theorem .....	565
	Describing the Use of Statistics .....	568

<b>CHAPTER 3:</b>	<b>Descending the Right Curve</b>	571
	Interpreting Learning as Optimization	572
	Supervised learning	572
	Unsupervised learning	573
	Reinforcement learning	573
	The learning process	573
	Exploring Cost Functions	576
	Descending the Error Curve	578
	Updating by Mini-Batch and Online	581
<b>CHAPTER 4:</b>	<b>Validating Machine Learning</b>	585
	Checking Out-of-Sample Errors	586
	Looking for generalization	587
	Getting to Know the Limits of Bias	589
	Keeping Model Complexity in Mind	591
	Keeping Solutions Balanced	592
	Depicting learning curves	593
	Training, Validating, and Testing	595
	Resorting to Cross-Validation	596
	Looking for Alternatives in Validation	597
	Optimizing Cross-Validation Choices	598
	Exploring the space of hyper-parameters	599
	Avoiding Sample Bias and Leakage Traps	601
	Watching out for snooping	602
	<b>BOOK 9: APPLYING MACHINE LEARNING</b>	603
<b>CHAPTER 1:</b>	<b>Starting with Simple Learners</b>	605
	Discovering the Incredible Perceptron	606
	Falling short of a miracle	606
	Touching the nonseparability limit	608
	Growing Greedy Classification Trees	610
	Predicting outcomes by splitting data	610
	Pruning overgrown trees	614
	Taking a Probabilistic Turn	615
	Understanding Naïve Bayes	615
	Estimating response with Naïve Bayes	618
<b>CHAPTER 2:</b>	<b>Leveraging Similarity</b>	623
	Measuring Similarity between Vectors	624
	Understanding similarity	624
	Computing distances for learning	625

Using Distances to Locate Clusters. . . . .	626
Checking assumptions and expectations. . . . .	628
Inspecting the gears of the algorithm . . . . .	629
Tuning the K-Means Algorithm . . . . .	630
Experimenting K-means reliability . . . . .	631
Experimenting with how centroids converge . . . . .	634
Searching for Classification by k-Nearest Neighbors. . . . .	637
Leveraging the Correct K Parameter . . . . .	638
Understanding the k parameter . . . . .	638
Experimenting with a flexible algorithm . . . . .	639
<b>CHAPTER 3: Hitting Complexity with Neural Networks . . . . .</b>	<b>643</b>
Learning and Imitating from Nature. . . . .	644
Going forth with feed-forward. . . . .	645
Going even deeper down the rabbit hole . . . . .	647
Getting back with backpropagation . . . . .	650
Struggling with Overfitting . . . . .	653
Understanding the problem . . . . .	653
Opening the black box . . . . .	654
Introducing Deep Learning . . . . .	657
<b>CHAPTER 4: Resorting to Ensembles of Learners . . . . .</b>	<b>661</b>
Leveraging Decision Trees . . . . .	662
Growing a forest of trees . . . . .	663
Understanding the importance measures. . . . .	667
Working with Almost Random Guesses. . . . .	670
Bagging predictors with Adaboost . . . . .	670
Boosting Smart Predictors. . . . .	673
Meeting again with gradient descent . . . . .	674
Averaging Different Predictors . . . . .	676
<b>CHAPTER 5: Real-World Applications . . . . .</b>	<b>677</b>
Classifying Images . . . . .	677
Working with a set of images. . . . .	678
Extracting visual features . . . . .	683
Recognizing faces using eigenfaces . . . . .	684
Classifying images . . . . .	688
Scoring Opinions and Sentiments. . . . .	691
Introducing natural language processing . . . . .	691
Understanding how machines read . . . . .	692
Processing and enhancing text . . . . .	694
Scraping textual data sets from the web . . . . .	699

Handling problems with raw text .....	702
Using Scoring and Classification .....	703
Performing classification tasks .....	704
Analyzing reviews from e-commerce .....	706
Recommending Products and Movies .....	710
Realizing the revolution .....	711
Downloading rating data .....	712
Trudging through the MovieLens data set .....	712
Navigating through anonymous web data .....	714
Encountering the limits of rating data .....	715
Leveraging SVD .....	716
<b>INDEX.....</b>	<b>725</b>





# Introduction

The ability to read, write, and understand code has never been more important, useful, or lucrative than it is today. Computer code has forever changed our lives. Many people can't even make it through the day without interacting with something built with code. Even so, for many people, the world of coding seems complex and inaccessible. Maybe you participated in a tech-related business meeting and did not fully understand the conversation. Perhaps you tried to build a web page for your family and friends, but ran into problems displaying pictures or aligning text. Maybe you're even intimidated by the unrecognizable words on the covers of books about coding, words such as HTML, CSS, JavaScript, Python, or Ruby.

If you've previously been in these situations, then *Coding All-in-One For Dummies* is for you. This book explains basic concepts so you can participate in technical conversations and ask the right questions, and it goes even further than *Coding For Dummies* by covering additional topics in data science, machine learning, and coding careers. Don't worry — this book assumes you're starting with little to no previous coding knowledge, and I haven't tried to cram every possible coding concept into these pages. Additionally, I encourage you here to learn by doing and by actually creating your own programs. Instead of a website, imagine that you want to build a house. You could spend eight years studying to be an architect, or you could start today by learning a little bit about foundations and framing. This book kick-starts your coding journey today.

The importance of coding is ever-increasing. As author and technologist Douglas Rushkoff famously said, “program or be programmed.” When humans invented languages and then the alphabet, people learned to listen and speak, and then read and write. In our increasingly digital world, it's important to learn not just how to use programs but also how to make them. For example, observe this transition in music. For over a century, music labels decided what songs the public could listen to and purchase. In 2005, three coders created YouTube, which allowed anyone to release songs. Today more songs have been uploaded to YouTube than have been released by all the record labels combined in the past century.

Accompanying this book are examples at [www.codecademy.com](http://www.codecademy.com), whose exercises are one of the easiest ways to learn how to code without installing or downloading anything. The Codecademy website includes examples and exercises from this book, along with projects and examples for additional practice.

# About This Book

This book is designed for readers with little to no coding experience, and gives an overview of programming to non-programmers. In plain English, you learn how code is used to create web programs, who makes those programs, and the processes they use. The topics covered include

- » Explaining what coding is and answering the common questions related to code
- » Building basic websites using the three most common languages: HTML, CSS, and JavaScript
- » Surveying other programming languages such as Python
- » Creating an application using HTML, CSS, and JavaScript
- » Analyzing data using machine learning algorithms and techniques
- » Exploring coding careers paths and different ways to learn how to code

As you read this book, keep the following in mind:

- » The book can be read from beginning to end, but feel free to skip around if you like. If a topic interests you, start there. You can always return to the previous chapters, if necessary.
- » At some point, you will get stuck, and the code you write will not work as intended. Do not fear! There are many resources to help you, including support forums, others on the Internet, and me! Using Twitter, you can send me a public message at @nikhilgabraham with the hashtag #codingFD. Additionally, you can sign up for book updates and explanations for changes to programming language commands by visiting <http://tinyletter.com/codingfordummies>.
- » Code in the book will appear in a monospaced font like this:  
`<h1>Hi there! </h1>`.

## Foolish Assumptions

I do not make many assumptions about you, the reader, but I do make a few.

I assume you don't have previous programming experience. To follow along, then, you only need to be able to read, type, and follow directions. I try to explain as many concepts as possible using examples and analogies you already know.

I assume you have a computer running the latest version of Google Chrome. The examples in the book have been tested and optimized for the Chrome browser, which is available for free from Google. Even so, the examples may also work in the latest version of Firefox. Using Internet Explorer for the examples in this book, however, is discouraged.

I assume you have access to an Internet connection. Some of the examples in the book can be done without an Internet connection, but most require one so that you can access and complete the exercises on [www.codecademy.com](http://www.codecademy.com).

For the books on data analysis and machine learning, I assume you are able to download and install the Python programming language and associated programming libraries, both of which are available for free. I also assume you have some math background and understand how algorithms work.

## Icons Used in This Book

Here are the icons used in the book to flag text that should be given extra attention or that can be skipped.



TIP

This icon flags useful information or explains a shortcut to help you understand a concept.



TECHNICAL  
STUFF

This icon explains technical details about the concept being explained. The details might be informative or interesting, but are not essential to your understanding of the concept at this stage.



REMEMBER

Try not to forget the material marked with this icon. It signals an important concept or process that you should keep in mind.



WARNING

Watch out! This icon flags common mistakes and problems that can be avoided if you heed the warning.

# Beyond the Book

A lot of extra content that you won't find in this book is available at [www.dummies.com](http://www.dummies.com). Go online to find the following:

» **The source code for the examples in this book:** You can find it at

[www.dummies.com/go/codingaiodownloads](http://www.dummies.com/go/codingaiodownloads).

The source code is organized by chapter. The best way to work with a chapter is to download all the source code for it at one time.

» **The links to the Codecademy and other exercises:** You can find these at

[www.dummies.com/go/codingaiolinks](http://www.dummies.com/go/codingaiolinks).

» **Cheat Sheet:** You can find a list of common HTML, CSS, and JavaScript commands, among other useful information.

To view this book's Cheat Sheet, simply go to [www.dummies.com](http://www.dummies.com) and search for "Coding For Dummies All-in-One Cheat Sheet" in the Search box.

» **Updates:** Code and specifications are constantly changing, so the commands and syntax that work today may not work tomorrow. You can find any updates or corrections by visiting

<http://tinyletter.com/codingfordummies>.

# Where to Go from Here

All right, now that all the administrative stuff is out of the way, it's time to get started. You can totally do this. Congratulations on taking your first step into the world of coding!

# 1

## **Getting Started with Coding**

# Contents at a Glance

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<b>CHAPTER 1: What Is Coding?</b>	<b>7</b>
Defining What Code Is	8
Understanding What Coding Can Do for You	9
Surveying the Types of Programming Languages	13
Taking a Tour of a Web App Built with Code	16
<b>CHAPTER 2: Programming for the Web</b>	<b>19</b>
Displaying Web Pages on Your Desktop and Mobile Device	20
Coding Web Applications	26
Coding Mobile Applications	28
<b>CHAPTER 3: Becoming a Programmer</b>	<b>33</b>
Writing Code Using a Process	33
Picking Tools for the Job	38