

Index

- arrays, 22
- assignment, 8
- axes, 128
- bar graph, 138
- bit, 4
- break, 68
- byte, 4
- categorical, 174
- cell arrays, 101
- character encodings, 85
- character vectors, 86
- classes, 108
- classical conditioning, 150
- colon, 29
- comma-separated lists, 106
- command syntax, 44
- Command Window, 6
- commands, 7
- comments, 13
- computational modeling
 - ecological simulation, 159
 - representation, 78, 154, 159
 - Rescorla–Wagner, 150
- concatenation, 23
- conditional statements, 59
 - if, 59
 - switch, 60
- continue, 68
- CPU, 4
- Current Folder, 6, 112
- data analysis
 - grouping variables, 164
 - hierarchical, 169
 - joins, 165
 - key variables, 165
 - observation, 103
 - set operations, 165
 - summary statistics, 164
 - tabular, 163
 - tabular data, 103
- data types
 - arrays, 22
 - categorical, 174
 - cell arrays, 101
 - classes, 108
 - column vectors, 21
 - dimensions, 98
 - double, 26
 - empty matrix, 32
 - floating-point numbers, 26
 - hierarchical (nested), 169
 - higher-dimensional, 98
 - JSON, 169
 - logicals, 48
 - matrices, 22
 - methods, 108
 - observational vs. experimental, 173
 - properties, 108
 - row vectors, 20
 - scalars, 23
 - singleton dimensions, 98
 - struct, 105
 - table, 103
 - tabular, 103, 163
 - vectors, 20
- dialog boxes, 90
- dimensions, 22
- disk, 4
- doc(), 17
- documentation, 17
- dot indexing, 103
- double, 26
- Editor, 11
- element-wise operations, 26
- empty matrix, 32
- error bars, 138
- errors, 15
- expansion
 - scalar, 27
 - vector, 27
- experiment, 179
- experimental design, 179
 - control variables, 179
 - dependent variables, 179
 - factorial, 180
 - independent variables, 179
 - nuisance variables, 179
 - participant, 180
 - random assignment, 180
 - randomized variables, 179
 - response time, 187
 - sample size, 180
 - stimulus, 180
 - trial, 180
- Figure window, 130
- for loops, 63
- foraging behavior, 159
- functions, 36, 119
 - anonymous functions, 120
 - array dimensions, 38
 - colon, 29
 - command syntax, 44
 - element-wise operations, 26
 - function definition, 122
 - function files, 121, 125
 - handles, 120
 - inputs, 36
 - local functions, 126
 - matrix-building, 37
 - meta-programming, 91
 - multiple outputs, 43
 - no outputs, 44
 - operands, 9
 - operators, 9, 45
 - order of operations, 52
 - outputs, 36
 - overloading, 39
 - program flow, 121
 - random numbers, 72
 - side effects, 44
 - subcommands (Psychtoolbox), 194
 - unary operators, 49

user-defined functions, 121	panes, 6	Flip, 195
workspace, 121	Preferences, 7	graphics library, 200
wrappers, 45	Taskbar, 6	installation, 191
graphics, 128	Toolstrip, 7	key code, 193
axes, 128	Workspace, 7	keyboard, 193
bar graph, 138	matrices, 22	mouse, 202
error bars, 138	matrix multiplication, 66	rect, 197
Figure window, 130	meta-programming, 91	Screen, 194
handle, 136	metadata, 103	sound, 202
hierarchy, 142	name–value pairs, 135	subcommand, 194
histogram, 141	named inputs, 135	text, 201
legend, 133	nested data, 169	timestamp, 193
LineSpec, 134	nested loops, 65	
multiple graphs, 130		RAM, 4
plot(), 132	operands, 9	random numbers, 72
root, 142	operators, 9	readability, 14
title, 133	order of operations, 52	reference, 8
graphics handle, 136	overloading, 39	Rescorla–Wagner, 150
handle	<i>p</i> -value, 175	acquisition, 152
graphics, 136	paths, 111	association strength, 152
help(), 17	pixels, 100	compound stimulus, 155
hierarchical data, 169	Preferences, 7	conditioned stimulus, 151
higher-dimensional arrays,	problem solving, 71	extinction, 152
98	algorithms, 71	neutral stimulus, 151
histogram, 141	analogy, 79	unconditioned response, 151
	brute force, 77	unconditioned stimulus, 151
if statements, 59	greedy algorithms, 77	
images, 100	heuristics, 71	scalars, 23
indexing, 30	insight, 79	scientific notation, 30
logical, 53	means–end analysis, 71	scripts, 10
single, 31	representation, 78	comments, 13
	simulation, 72	errors, 15
linear algebra, 26	program flow, 58	function files, 125
linting, 16	blocks, 59	highlights, 16
logicals, 48	break, 68	linting, 16
aggregators, 52	conditionals, 59	style, 12
indexing, 53	continue, 68	warnings, 15
operators, 49	for, 63	side effects, 44
short-circuit, 52	functions, 121	single indexing, 31
loops, 61	if, 59	singleton dimensions, 98
for, 63	loops, 61	statistics, 173
simulation, 72	nested, 65	<i>p</i> -value, 175
while, 61	problem solving, 71	causal inference, 173
	switch, 60	correlational analysis,
MATLAB interface	try-catch, 123	175
Command Window, 6	while, 61	observational and experimental data,
Current Folder, 6	Psychtoolbox, 190	173
Editor, 11	alpha value, 199	significance, 175
Figure window, 130	back display surface, 195	storage
		assignment, 8
		bit, byte, 4

218 Index

storage (cont.)	subplot, 130	transpose, 37
Current Folder, 112	switch statements, 60	trial, 152, 180
disk, 4		try-catch, 123
MATLAB format, 114	tables, 103	
path, 111	tabular data, 163	variables, 8
pointers, 120	text	vectors, 20
RAM, 4	character encodings, 85	
reference, 8	character vectors, 86	warnings, 15
saving data, 116	command syntax, 44	while loops, 61
Workspace, 7	dialog, 89	while true loops, 68
strings, 86	escape characters, 87	whos, 25
structs, 105	strings, 86	Workspace, 7, 121