

Palmer penguins

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We can write text as normal, interspersed with code that outputs something. We can choose to have the code shown or hidden, or provide the reader with the option to see the code if they wish. We can also reference the figures Figure 1 and Figure 2

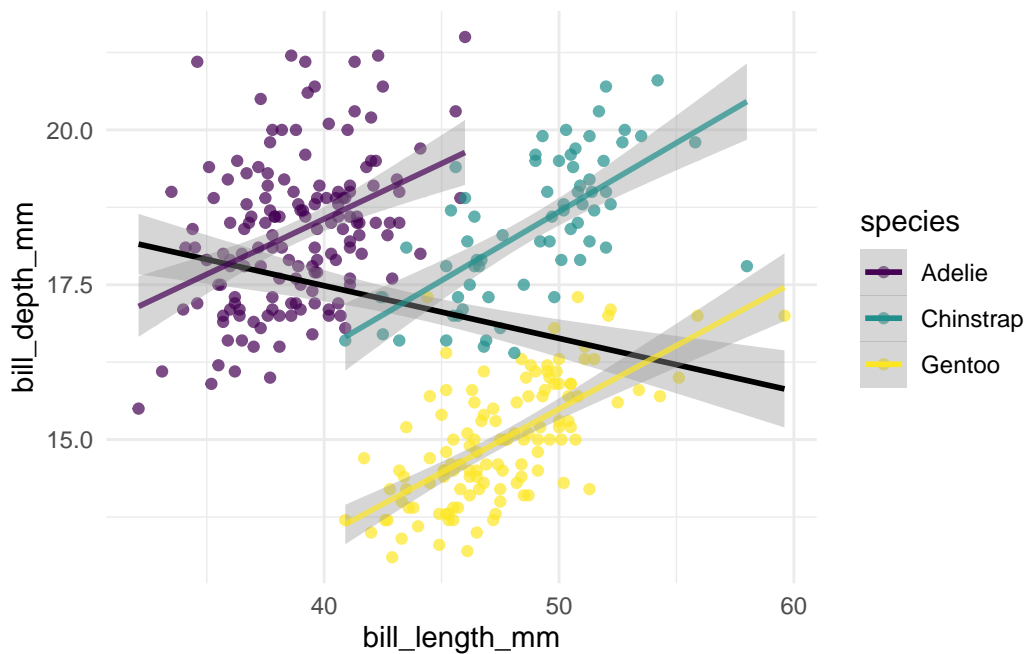


Figure 1: Penguin bill length and depth ratio by species

And the order of the figures does not really matter. If you change the order to the figures, but keep their labels, no references will be broken in the report. We can also incorporate text derived from data to look as if it were “normal” text. Like the number of rows in the data being 344, and the number of female penguins being 165. We can also add footnotes¹, and

¹which can be very convenient

they will keep themselves numbered and placed correctly²

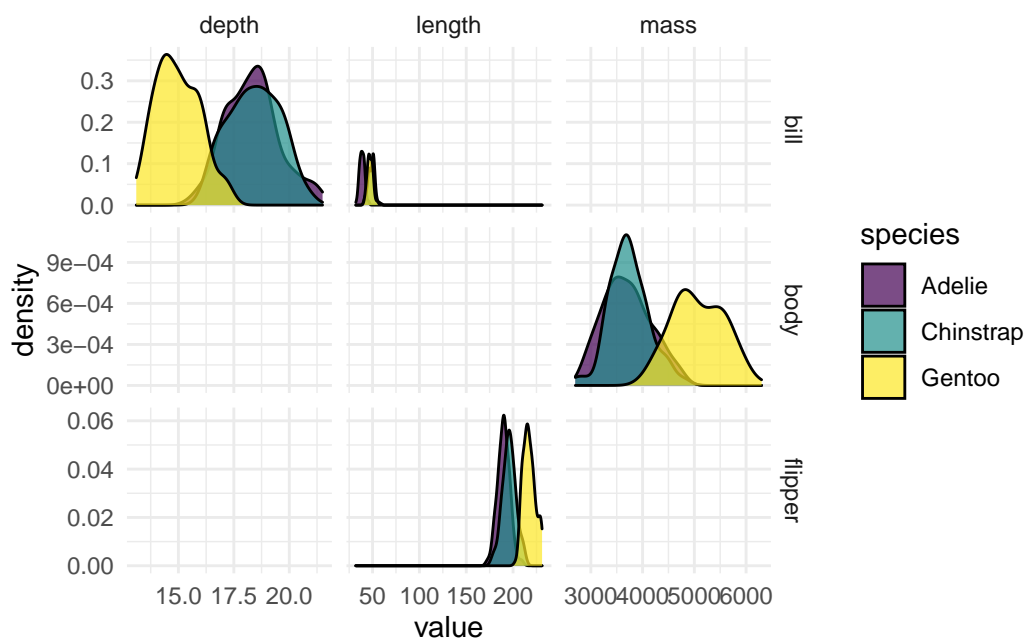


Figure 2: Penguin density by species

A summary of the observed penguin data can be found in Table 1. For this cross-reference to work, we *need* to have the `tbl-` prefix in the label name of the chunk that creates the table. The number of the table will update if another table appears before it, meaning you no longer need to deal with number your content correctly.

²without us really needing to keep it all in mind.

Table 1: Penguin summary

name	species	Mean	SD	Min	Max	N
bill depth mm	Adelie	18.346	1.217	15.5	21.5	151
	Chinstrap	18.421	1.135	16.4	20.8	68
	Gentoo	14.982	0.981	13.1	17.3	123
bill length mm	Adelie	38.791	2.663	32.1	46.0	151
	Chinstrap	48.834	3.339	40.9	58.0	68
	Gentoo	47.505	3.082	40.9	59.6	123
body mass g	Adelie	3700.662	458.566	2850.0	4775.0	151
	Chinstrap	3733.088	384.335	2700.0	4800.0	68
	Gentoo	5076.016	504.116	3950.0	6300.0	123
flipper length mm	Adelie	189.954	6.539	172.0	210.0	151
	Chinstrap	195.824	7.132	178.0	212.0	68
	Gentoo	217.187	6.485	203.0	231.0	123

Table 2: Predicting bill length by bill depth, split by species and island.

species	island	term	estimate	std.error	statistic	p.value
Adelie	Biscoe	(Intercept)	21.026	5.238	4.014	0.000
		bill depth mm	0.977	0.285	3.434	0.001
	Dream	(Intercept)	18.343	4.662	3.935	0.000
		bill depth mm	1.104	0.255	4.332	0.000
	Torgersen	(Intercept)	28.588	5.774	4.951	0.000
		bill depth mm	0.562	0.313	1.799	0.078
Chinstrap	Dream	(Intercept)	13.428	5.057	2.655	0.010
		bill depth mm	1.922	0.274	7.015	0.000
Gentoo	Biscoe	(Intercept)	17.230	3.282	5.250	0.000
		bill depth mm	2.021	0.219	9.245	0.000

Models were run independently on data from the different island and species.