

```

1 ---
2 title: "PSC520_FinalProject_Deibler"
3 author: "Ashley Deibler"
4 date: "r Sys.Date()"
5 output: pdf_document
6 ---
7 # create variables
8 ```{r}
9 catdogdata <- aas_catdogdata
10 head(catdogdata)
11
12 id <- catdogdata$ID
13 species <- catdogdata$species
14 breed <- catdogdata$breed
15 condition_intake <- catdogdata$intake_condition
16 sex_outcome <- catdogdata$sex_outcome
17 age_intake <- catdogdata$age_intake_days
18 age_outcome <- catdogdata$age_outcome_days
19 time_shelter <- catdogdata$time_shelter_days
20 outcome_type <- catdogdata$outcome_type
21 outcome_sub <- catdogdata$outcome_subtype
22 ```

```

A tibble: 6 x 10

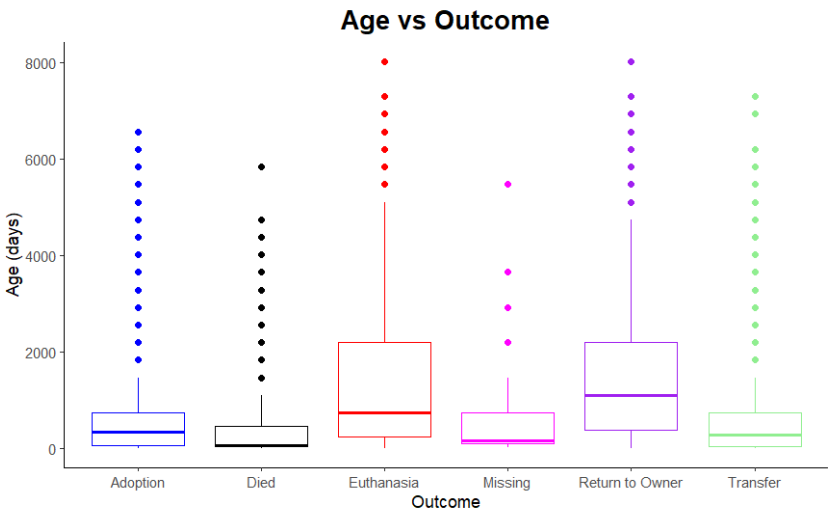
ID	species	breed	intake_condition	sex_outcome	age_intake_days	age_outcome_days	time_shelter_days	outcome_type	outcome_subtype
<chr>	<chr>	<chr>	<chr>	<chr>	<dbl>	<dbl>	<dbl>	<chr>	<chr>
A667848	Cat	Abyssinian Mix	Normal	Neutered Male	60	60	7.118056	Transfer	Partner
A350276	Cat	Abyssinian Mix	Normal	Spayed Female	4745	4745	168.167361	Adoption	NA
A664906	Cat	Abyssinian Mix	Normal	Spayed Female	365	365	5.054861	Adoption	NA
A707713	Cat	Abyssinian Mix	Normal	Spayed Female	7	90	91.075000	Adoption	NA
A765955	Cat	American Curl Shorthair	Normal	Spayed Female	30	60	28.754167	Adoption	Foster
A765956	Cat	American Curl Shorthair	Normal	Spayed Female	30	60	28.753472	Adoption	Foster

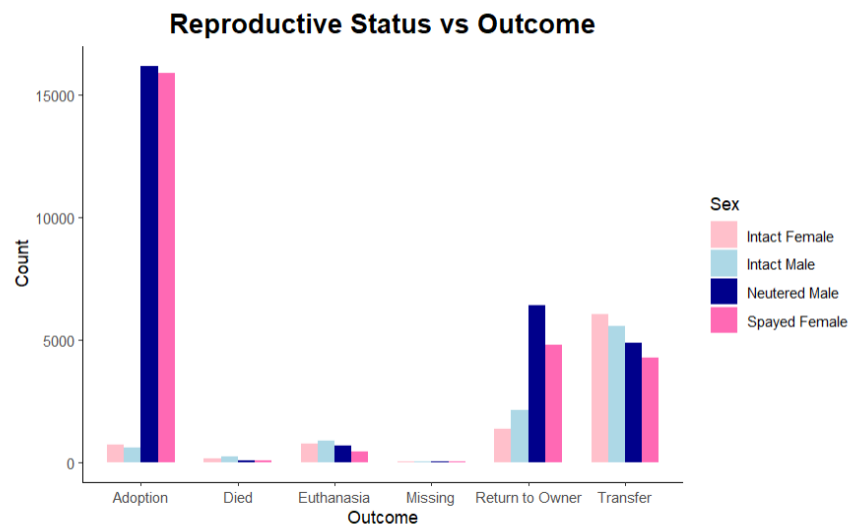
```

23
24 # boxplot for outcome v age
25 ```{r}
26 install.packages("ggplot2")
27 library("ggplot2")
28 install.packages("tidyverse")
29 library(tidyverse)
30 install.packages("dplyr")
31 library(dplyr)
32
33 adoption = filter(catdogdata, outcome_type=="Adoption")
34 died = filter(catdogdata, outcome_type=="Died")
35 missing = filter(catdogdata, outcome_type=="Missing")
36 return_owner = filter(catdogdata, outcome_type=="Return to Owner")
37 euthanasia = filter(catdogdata, outcome_type=="Euthanasia")
38 transfer = filter(catdogdata, outcome_type=="Transfer")
39
40
41 out_age_bp <- ggplot() +
42   geom_boxplot(data = adoption, mapping = aes(x =outcome_type, y = age_outcome_days),
43     col = 'blue') +
44   geom_boxplot(data = transfer, mapping = aes(x =outcome_type, y = age_outcome_days),
45     col = 'lightgreen') +
46   geom_boxplot(data = euthanasia, mapping = aes(x =outcome_type, y = age_outcome_days),
47     col = 'red') +
48   geom_boxplot(data = died, mapping = aes(x =outcome_type, y = age_outcome_days),
49     col = 'black') +
50   geom_boxplot(data = missing, mapping = aes(x =outcome_type, y = age_outcome_days),
51     col = 'magenta') +
52   geom_boxplot(data = return_owner, mapping = aes(x =outcome_type, y = age_outcome_days),
53     col = 'purple')+
54   theme_classic() +
55   labs(title = "Age vs Outcome",
56     x = "Outcome",
57     y = "Age (days)") +
58   theme(plot.title = element_text(size = 16,

```

```
58   theme(plot.title = element_text(size = 16,  
59                                   face = "bold",  
60                                   hjust = 0.5))  
61  
62   out_age_bp  
63   ...
```

[illegible]

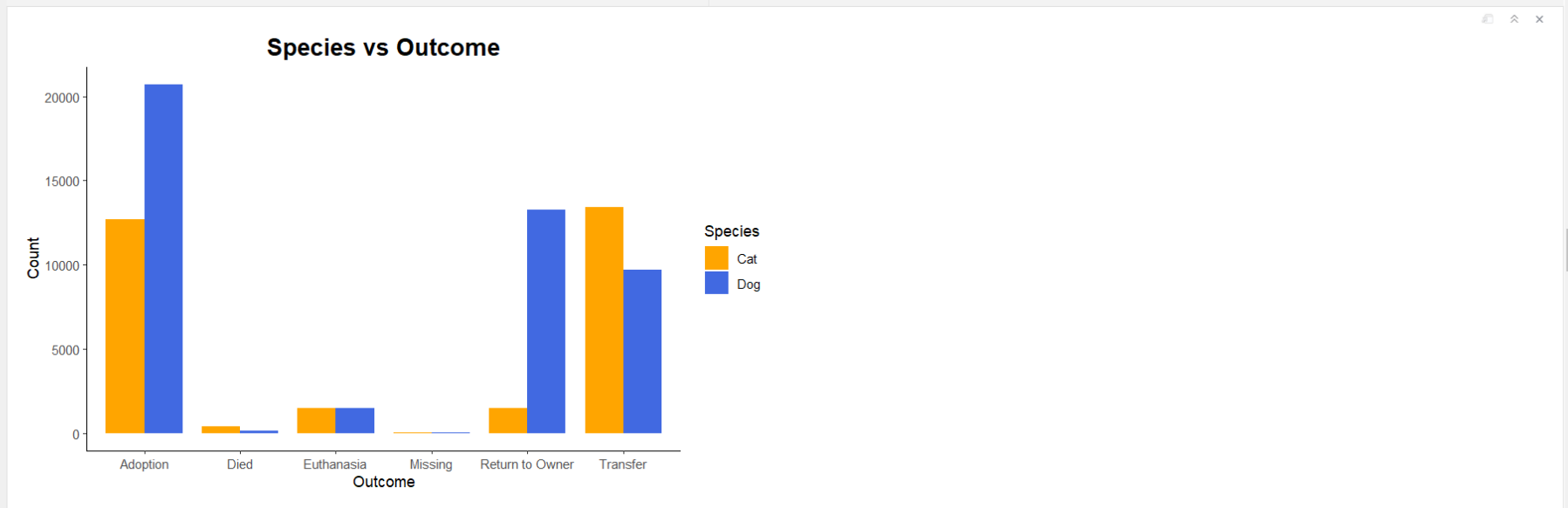


```

98 # barplot for outcome v species
99 {r}
100 ##Packages
101 library(ggplot2)
102
103 ##Create Barplot
104 species_bar <- ggplot(outcome, aes(x = outcome_type, fill = species)) +
105   geom_bar(position = 'dodge', width = 0.8) +
106   scale_fill_manual(values = c("orange",
107                                "royalblue")) +
108   labs(title = "Species vs Outcome",
109        x = "Outcome",
110        y = "Count",
111        fill = "Species") +
112   theme_classic() +
113   theme(plot.title = element_text(size = 16,
114                                   face = "bold",
115                                   hjust = 0.5))
116
117 species_bar
118

```

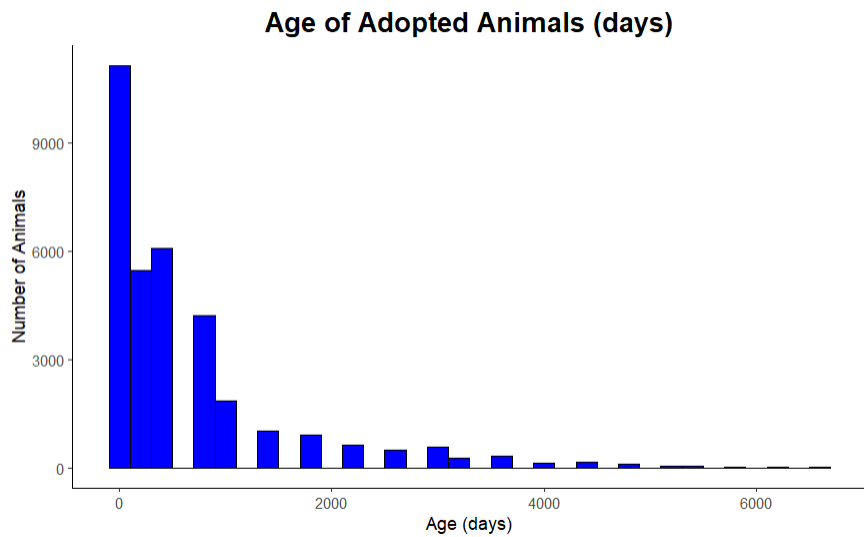
118



```

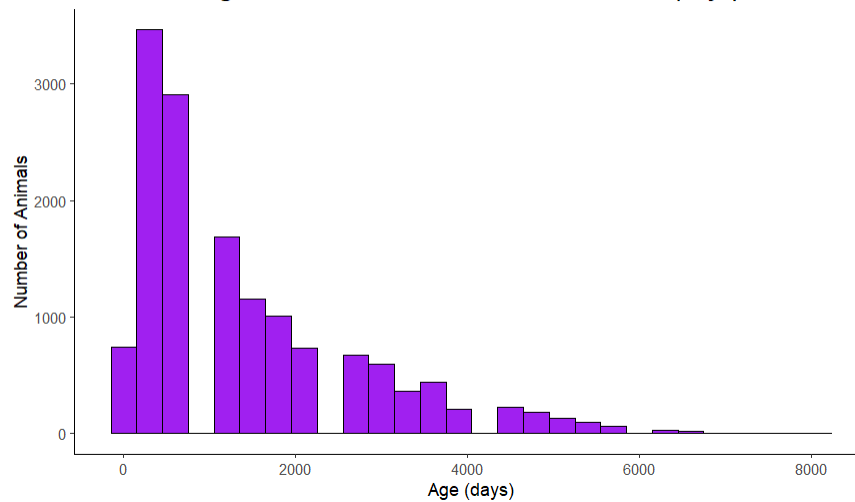
119
120
121 # histogram for distribution of ages from adopted individuals
122 {r}
123 ##Packages
124
125 library(ggplot2)
126 library(dplyr)
127
128 ##Create Histogram
129
130 agehist <- ggplot(data = adoption, mapping = aes(x = age_outcome_days)) +
131   geom_histogram(bins = 50, binwidth = 200,
132                 color = "black", fill = "blue") +
133   labs(title = "Age of Adopted Animals (days)",
134        x = "Age (days)",
135        y = "Number of Animals") +
136   theme_classic() +
137   theme(plot.title = element_text(size = 16,
138                                   face = "bold",
139                                   hjust = 0.5))
140 agehist
141
142
143

```



```
144
145 # histogram for distribution of ages and those returned to their owners
146
147 ```{r}
148 ##Packages
149
150 library(ggplot2)
151 library(dplyr)
152
153 ##Create Histogram
154
155 rto_hist <- ggplot(data = return_owner, mapping = aes(x = age_outcome_days)) +
156   geom_histogram(bins = 50, binwidth = 300,
157     color = "black", fill = "purple") +
158   labs(title = "Age of Animals Returned to Their Owners (days)",
159     x = "Age (days)",
160     y = "Number of Animals") +
161   theme_classic() +
162   theme(plot.title = element_text(size = 14,
163     face = "bold",
164     hjust = 0.5))
165 rto_hist
166
167 ```
```

### Age of Animals Returned to Their Owners (days)



```

169 # pie chart for reasons behind euthanasia
170 ...{r}
171 ##Create Data Frame
172
173 #Count Suffering
174 value_suff <- "Suffering"
175 count_suffering <- length(which(euthanasia$outcome_subtype == value_suff))
176 count_suffering #2006
177
178 #Count At Vet
179 value_vet <- "At Vet"
180 count_vet <- length(which(euthanasia$outcome_subtype==value_vet))
181 count_vet #35
182
183 #Count Rabies
184 value_rabies <- "Rabies Risk"
185 count_rabies <- length(which(euthanasia$outcome_subtype==value_rabies))
186 count_rabies #149
187
188 #Count Medical
189 value_med <- "Medical"
190 count_med <- length(which(euthanasia$outcome_subtype==value_med))
191 count_med #118
192
193 #Count Aggressive
194 value_agg <- "Aggressive"
195 count_agg <- length(which(euthanasia$outcome_subtype==value_agg))
196 count_agg #496
197
198 #Count Court Investigation
199 value_court <- "Court/Investigation"
200 count_court <- length(which(euthanasia$outcome_subtype==value_court))
201 count_court #23
202
203 reason = c("Suffering", "Rabies Risk", "Aggressive", "At Vet", "Medical", "Court/Investigation")
204 value = c(2006, 149, 496, 35, 118, 23)

```

```

205 reasons_euth <- data.frame(reason, value)
206
207 ##Create Blank Theme
208 blank_theme <- theme_minimal() +
209   theme(
210     axis.title.x = element_blank(),
211     axis.title.y = element_blank(),
212     panel.border = element_blank(),
213     panel.grid = element_blank(),
214     axis.ticks = element_blank(),
215     plot.title = element_text(size = 14, face = "bold"))
216
217 ##Packages
218 library(dplyr)
219 library(ggplot2)
220 install.packages("ggrepel")
221 library(ggrepel)
222 library(forcats)
223 library(scales)
224
225 ##Create Pie Chart
226
227 reasons_euth %>%
228   arrange(desc(value)) %>%
229   mutate(prop = percent(value/sum(value))) -> reasons_euth
230
231 euth_pie <- ggplot(reasons_euth, aes(x = "", y = value, fill = fct_inorder(reason))) +
232   geom_bar(width = 1, stat = "identity") +
233   coord_polar("y", start = 0) +
234   geom_label_repel(aes(label = prop), size = 5, show.legend = F, nudge_x = 1) +
235   guides(fill = guide_legend(title = "Reason for Euthanasia")) +
236   labs(title = "Proportion of Reasons for Euthanasia") +
237   scale_fill_manual(values = c("red", "orange", "yellow", "green", "blue", "purple")) +
238   blank_theme +
239   theme(axis.text.x = element_blank())

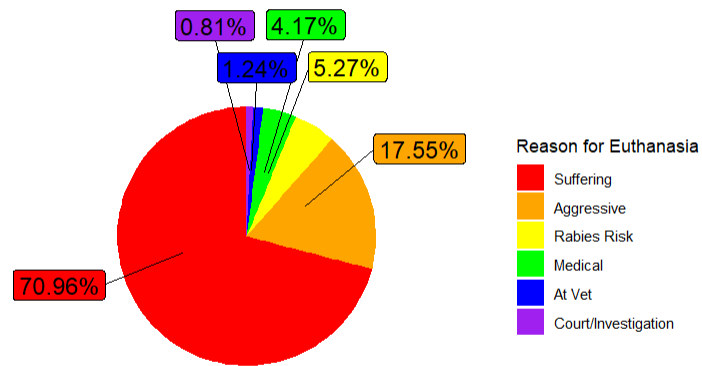
```

```

240
241 euth_pie
242
243

```

Proportion of Reasons for Euthanasia



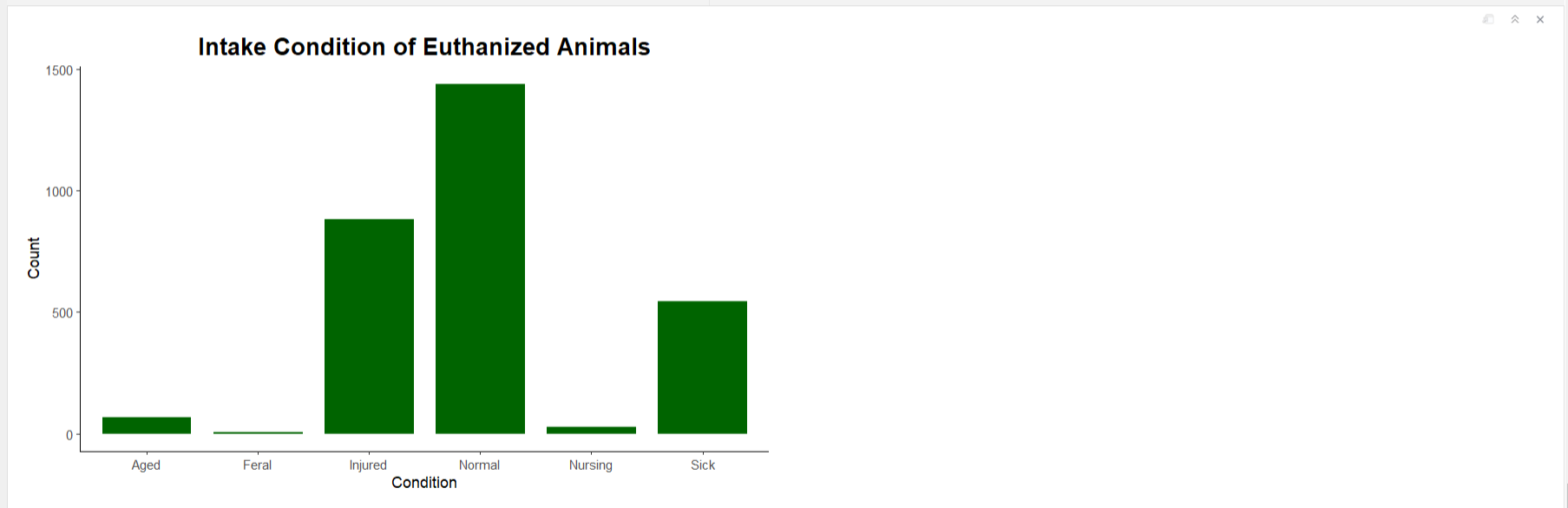
```

244
245 # barplot for intake condition and outcome
246 ```{r}
247 ##Packages
248 library(ggplot2)
249 library(dplyr)
250
251
252 condition_intake
253 normal = filter(outcome, intake_condition=="Normal")
254 injured = filter(outcome, intake_condition=="Injured")
255 sick = filter(outcome, intake_condition=="Sick")
256 aged = filter(outcome, intake_condition=="Aged")
257 nursing = filter(outcome, intake_condition=="Nursing")
258 feral = filter(outcome, intake_condition=="Feral")
259
260 condition <- rbind(normal, injured, sick, aged, nursing, feral)
261
262 con_euth <- filter(condition, outcome_type=="Euthanasia")
263
264 con_euth_bar <- ggplot(con_euth, aes(x = intake_condition)) +
265   geom_bar(position = 'dodge', width = 0.8, fill = 'darkgreen') +
266   labs(title = "Intake Condition of Euthanized Animals",
267        x = "Condition",
268        y = "Count") +
269   theme_classic() +
270   theme(plot.title = element_text(size = 16,
271                                   face = "bold",
272                                   hjust = 0.5))
273
274 con_euth_bar
275
276 ## Create Bar plot
277

```



```
273 con_euth_bar
274
275
276 ## Create Bar plot
277
```



278