

AIC BIC

```
library(dplyr)
library(knitr)

load("data/input.RData")
load("data/input_mod_1.RData")

load("data/mod_0_goals.RData")
load("data/mod_B_goals.RData")
load("data/mod_C_goals.RData")
load("data/mod_3_goals.RData")
load("data/mod_12_goals.RData")

load("data/mod_0_year.RData")
load("data/mod_B_year.RData")
load("data/mod_C_year.RData")
load("data/mod_3_year.RData")
load("data/mod_12_year.RData")
```

```
aic <- function(loglik, k) {
  2*k - 2*loglik
}

bic <- function(loglik, k, n) {
  k*log(n) - 2*loglik
}
```

```
tib = tibble(Model = rep(c("A", "B", "C", "D", "E"), 2),
             Param = c(rep("Constant", 5), rep("Per season", 5)),
             loglik = c(mod_0_goals$loglik,
                        mod_B_goals$loglik,
                        mod_C_goals$loglik,
                        mod_3_goals$loglik,
                        mod_12_goals$loglik,
                        mod_0_year$loglik,
                        mod_B_year$loglik,
                        mod_C_year$loglik,
                        mod_3_year$loglik,
                        mod_12_year$loglik),
             k = c(length(unlist(mod_0_goals)) - 2,
                   length(unlist(mod_B_goals)) - 2,
                   length(unlist(mod_C_goals)) - 2,
                   length(unlist(mod_3_goals)) - 2,
                   length(unlist(mod_12_goals)) - 2,
                   length(unlist(mod_0_year)) - 2,
                   length(unlist(mod_B_year)) - 2,
```

```

length(unlist(mod_C_year)) - 2,
length(unlist(mod_3_year)) - 2,
length(unlist(mod_12_year)) - 2),
  n = L1 + L2) %>%
rowwise() %>%
mutate(AIC = aic(loglik, k),
       BIC = bic(loglik, k, n))

```

```

tib %>%
  filter(Param == "Constant") %>%
  arrange(AIC) %>%
  kable()

```

Model	Param	loglik	k	n	AIC	BIC
E	Constant	-15175.80	67	10382	30485.61	30971.21
D	Constant	-15188.09	66	10382	30508.18	30986.54
C	Constant	-15206.75	65	10382	30543.50	31014.61
B	Constant	-15226.76	64	10382	30581.53	31045.39
A	Constant	-15254.00	63	10382	30634.01	31090.62

```

tib %>%
  filter(Param == "Constant") %>%
  arrange(BIC) %>%
  kable()

```

Model	Param	loglik	k	n	AIC	BIC
E	Constant	-15175.80	67	10382	30485.61	30971.21
D	Constant	-15188.09	66	10382	30508.18	30986.54
C	Constant	-15206.75	65	10382	30543.50	31014.61
B	Constant	-15226.76	64	10382	30581.53	31045.39
A	Constant	-15254.00	63	10382	30634.01	31090.62

```

tib %>%
  filter(Param == "Per season") %>%
  arrange(AIC) %>%
  kable()

```

Model	Param	loglik	k	n	AIC	BIC
E	Per season	-15059.83	245	10382	30609.67	32385.38
D	Per season	-15063.59	244	10382	30615.19	32383.66
C	Per season	-15081.60	243	10382	30649.19	32410.41
B	Per season	-15116.54	242	10382	30717.08	32471.05
A	Per season	-15143.85	241	10382	30769.71	32516.44

```

tib %>%
  filter(Param == "Per season") %>%

```

```

arrange(BIC) %>%
kable()

```

Model	Param	loglik	k	n	AIC	BIC
D	Per season	-15063.59	244	10382	30615.19	32383.66
E	Per season	-15059.83	245	10382	30609.67	32385.38
C	Per season	-15081.60	243	10382	30649.19	32410.41
B	Per season	-15116.54	242	10382	30717.08	32471.05
A	Per season	-15143.85	241	10382	30769.71	32516.44