Lead_Report

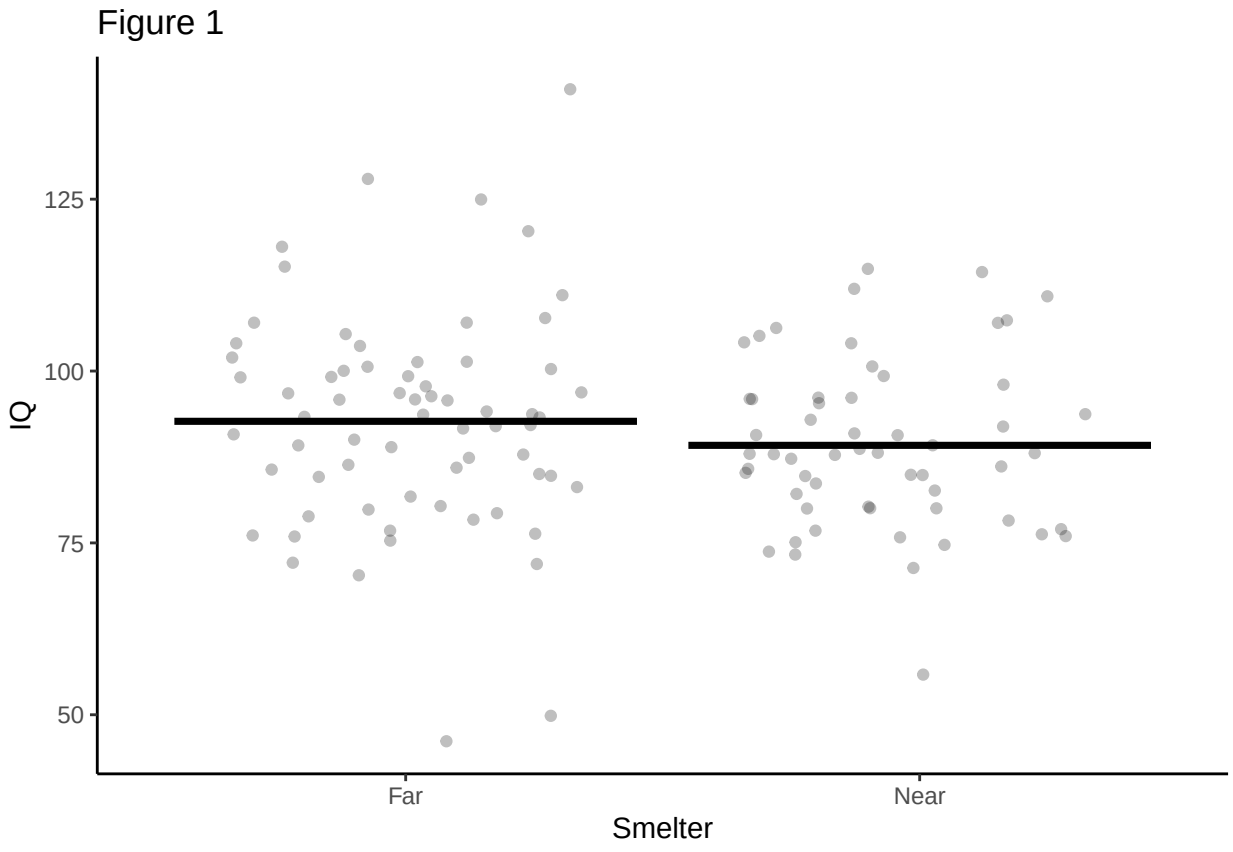
2024-10-01

```
lead <- read_csv("../DataRaw/lead-iq-01.csv", show_col_types = FALSE)
```

```
(
  lead
  %>% mutate(IQ = if_else(IQ == 999, 99, IQ))
) -> lead
```

```
set.seed(1)

(
  ggplot(data = lead, aes(x = Smelter, y = IQ))
  + geom_jitter(width = 0.35, alpha = 0.25)
  + stat_summary(fun = mean, geom = "crossbar")
  + labs(title = "Figure 1")
  + theme_classic()
)
```



```r
(
  lead
  %>% summarise(
    .by = Smelter,
    `Mean IQ` = mean(IQ) %>% round(2),
    `SD IQ` = sd(IQ) %>% round(2)
  )
) -> summaries

knitr::kable(summaries, format = "pipe", padding = 2, caption = "Table 1: Means and SDs")
```

Table 1: Table 1: Means and SDs

Smelter	Mean IQ	SD IQ
Far	92.69	15.97
Near	89.19	12.17

One of the member of the Far group originally had an IQ of 999. This was a mistake and the IQ was corrected to 99. Looking at *Figure 1* and *Table 1* above, it appears that those in the Far group have a slightly higher average IQ ($mean \pm SD = 92.69 \pm 15.97$) than those in the Near group ($mean \pm SD = 89.19 \pm 12.17$). However, there do not appear to be any large differences in IQ between the Near and Far groups.