pilot

Pilot

```
library(tidyverse)
library(estimatr)
library(ggplot2)
library(readr)


th <- theme_classic()
theme_set(th)
```

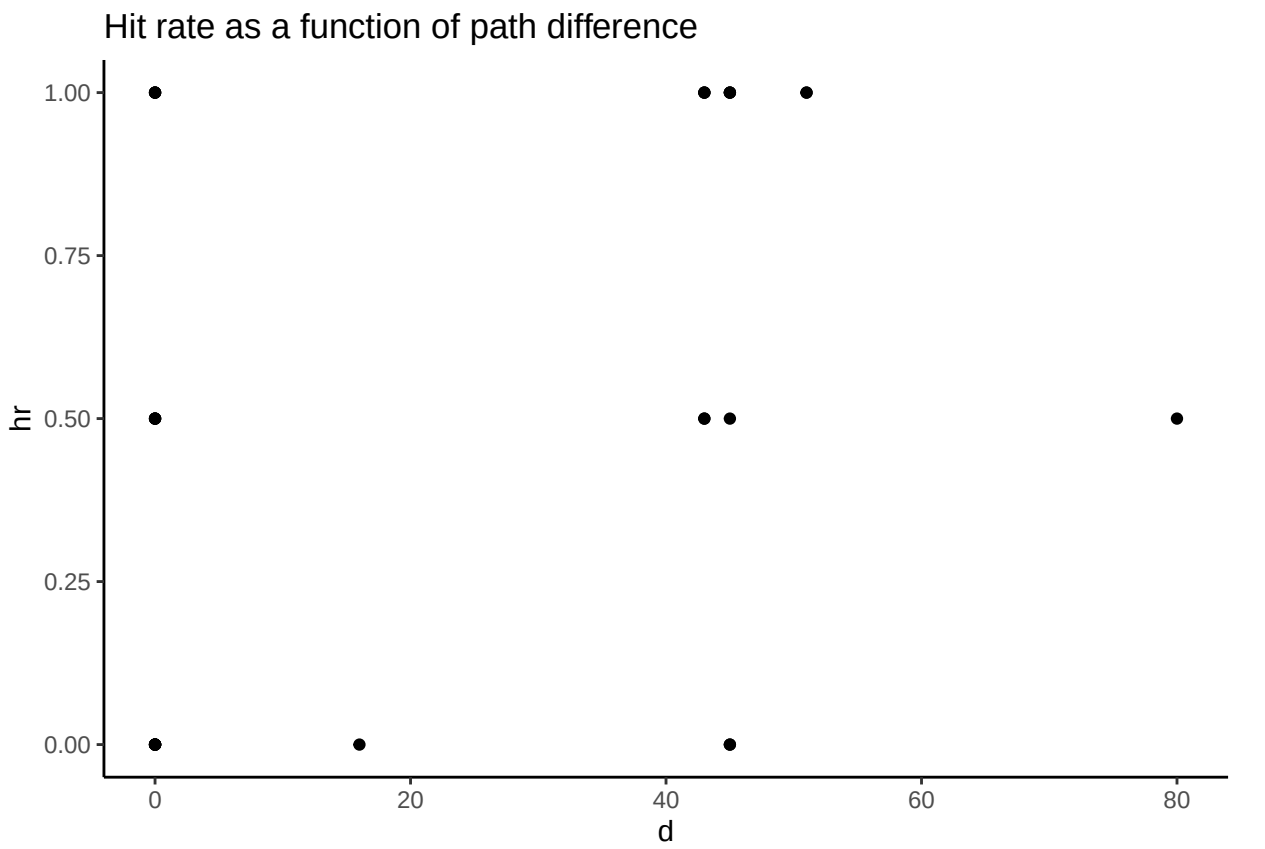
```
parsed_trials <- read_csv("~/output/experiments/pilot/parsed_trials.csv")
exp_data <- read_csv("~/output/scenes/pilot.csv") %>%
  rename(scene = id)
```

```
ate_data <- parsed_trials %>%
  left_join(exp_data, by = c("scene", "furniture", "move")) %>%
  mutate(resp_same = Response == "j",
         correct = !xor(base, resp_same))
```

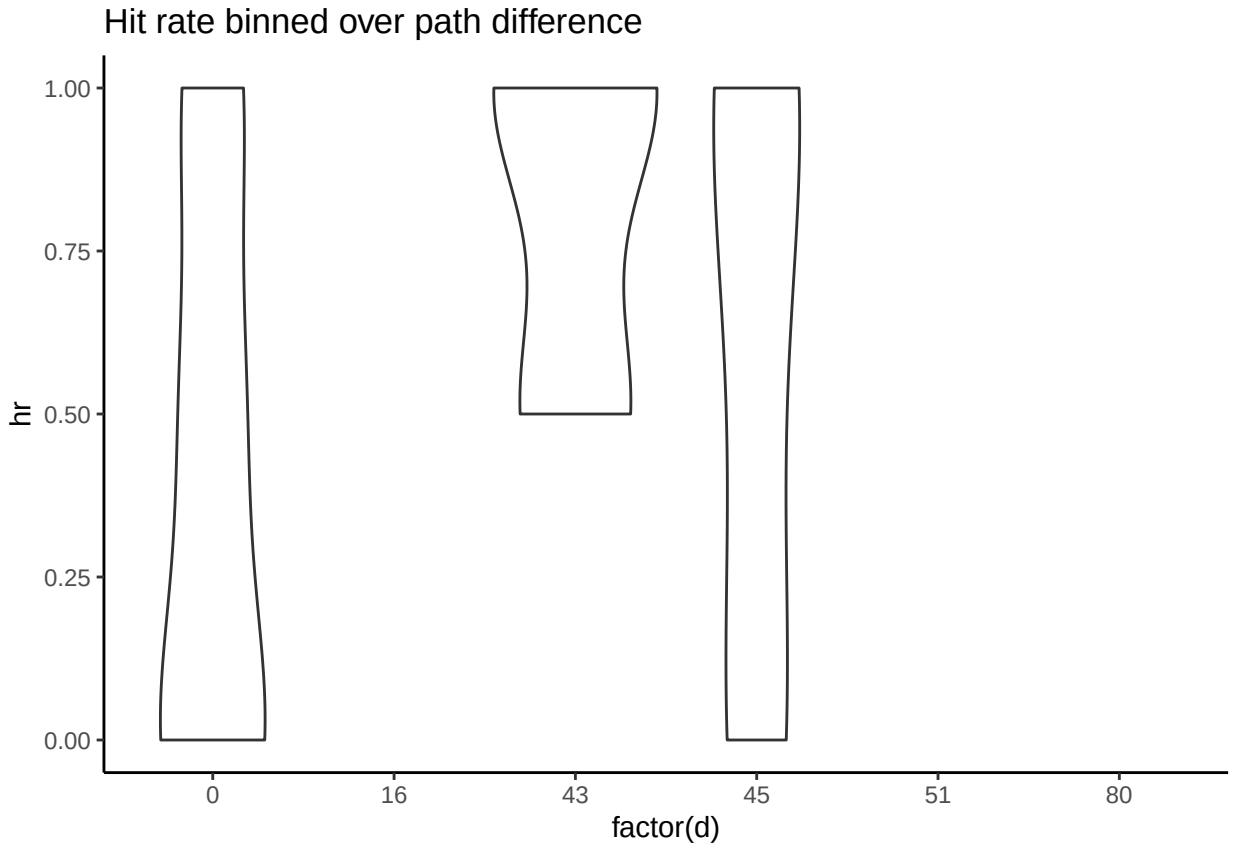
```
by_subj <- ate_data %>%
  group_by(ID)

hr_by_subj <- by_subj %>%
  filter(!base) %>%
  summarise(hr = mean(correct))

fp_by_subj <- by_subj %>%
  filter(base) %>%
  summarise(fp = 1.0 - mean(correct))

subject_performance <- hr_by_subj %>%
  left_join(fp_by_subj, by = "ID")

passed_subjects <- subject_performance %>%
  filter(hr > 1.5*fp)

good_data <- passed_subjects %>%
  left_join(ate_data)
```

```
by_trial <- good_data %>%
  group_by(scene, furniture, move)

hr_by_trial <- by_trial %>%
  filter(!base) %>%
  summarise(hr = mean(correct),
            d = mean(d))
```

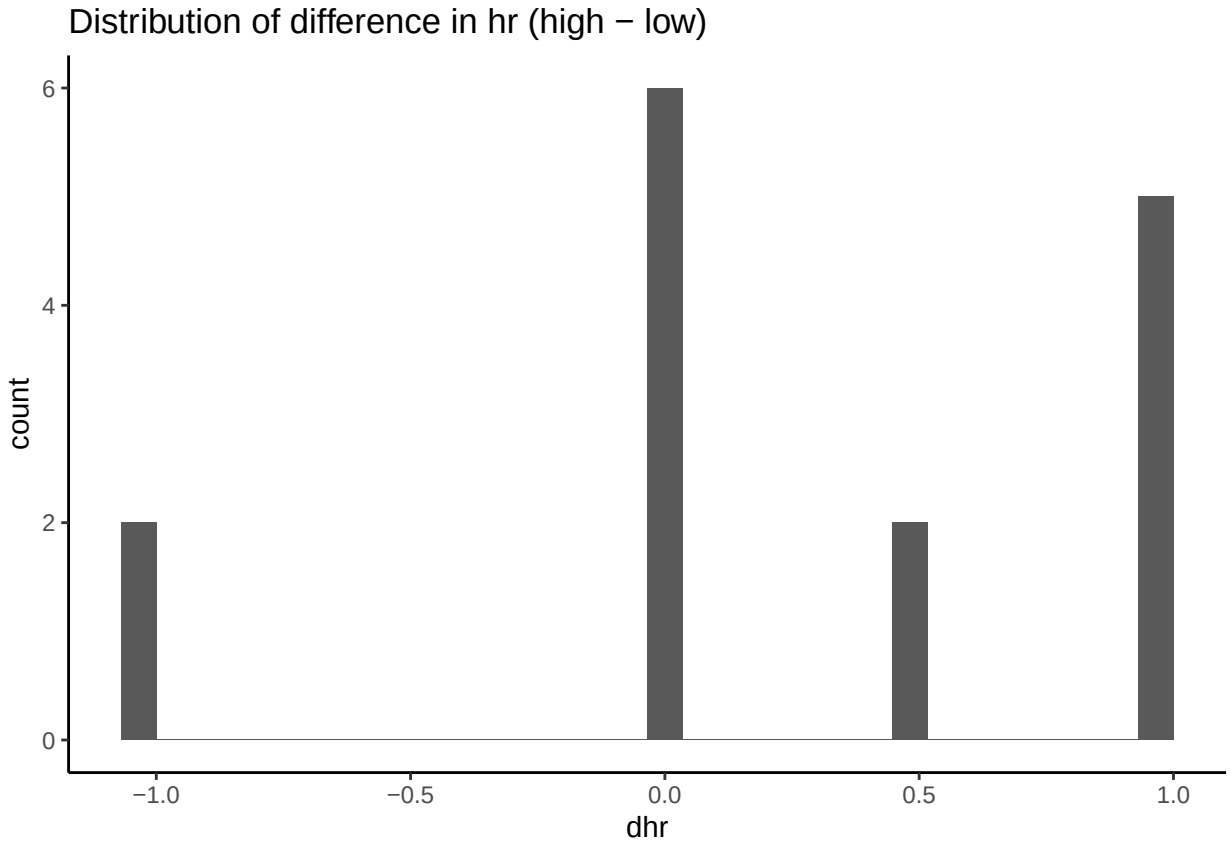
```r
hr_by_trial %>%
  ggplot(aes(x = d, y = hr)) +
  geom_point() +
  ggtitle("Hit rate as a function of path difference")
```




```r
hr_by_trial %>%
  ggplot(aes(x = factor(d), y = hr)) +
  geom_violin() +
  ggtitle("Hit rate binned over path difference")
```




```
delta_hr_by_scene <- hr_by_trial %>%
  arrange(d) %>%
  group_by(scene) %>%
  summarise(dhr = diff(hr),
            dd = diff(d))

delta_hr_by_scene %>%
  ggplot(aes(dhr)) +
  geom_histogram() +
  ggtitle("Distribution of difference in hr (high - low)")
```


Distribution of difference in hr (high − low)
count
6
4
2
0
−1.0
−0.5
0.0
0.5
1.0
dhr