

Rats in NY: Project Proposal

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```
library(tidyverse)
library(tidymodels)
library(httr)
```

```
squirrels <- read_csv("data/squirrel_data.csv")
head(squirrels)
```

```
# A tibble: 6 x 31
      X      Y `Unique Squirrel ID` Hectare Shift      Date Hectare Squirrel Num~1
  <dbl> <dbl> <chr>          <chr>   <chr>   <dbl>          <dbl>
1 -74.0  40.8 37F-PM-1014-03    37F     PM    10142018          3
2 -74.0  40.8 21B-AM-1019-04    21B     AM    10192018          4
3 -74.0  40.8 11B-PM-1014-08    11B     PM    10142018          8
4 -74.0  40.8 32E-PM-1017-14    32E     PM    10172018         14
5 -74.0  40.8 13E-AM-1017-05    13E     AM    10172018          5
6 -74.0  40.8 11H-AM-1010-03    11H     AM    10102018          3
# i abbreviated name: 1: `Hectare Squirrel Number`
# i 24 more variables: Age <chr>, `Primary Fur Color` <chr>,
#   `Highlight Fur Color` <chr>,
#   `Combination of Primary and Highlight Color` <chr>, `Color notes` <chr>,
#   Location <chr>, `Above Ground Sighter Measurement` <chr>,
#   `Specific Location` <chr>, Running <lgl>, Chasing <lgl>, Climbing <lgl>,
#   Eating <lgl>, Foraging <lgl>, `Other Activities` <chr>, Kuks <lgl>, ...
```

```
library(tidyverse)
squirrels |> group_by(`Runs from`) |> summarize(n())
```

```
# A tibble: 2 x 2
  `Runs from` `n()`
  <chr>      <dbl>
1 10102018    3
2 10172018   14
```

	<lgl>	<int>
1	FALSE	2345
2	TRUE	678

Introduction

As a result of the continuous human development, animals are inevitably interacting with humans more often. However, this form of interaction has mostly shown to be a disturbance to animals [1]. Animals see humans as a threat, so it is no surprise that they would treat the presence of humans the same way they would when they face other predators. Nevertheless, recent studies show that the squirrels actual act differently, as characterized by a phenomenon called synurbization, or the process of becoming urbanized [2].

In an effort to investigate these two competing theories, and to better understand the dynamic between squirrels and humans, we carry out this research project to explore what factors affect whether a squirrel is indifferent to human presence. From there, we would like to deduce whether the squirrels' attitude to humans are caused by human presence or other factors such as their species.

We hypothesize that the age category, fur color, location, distance above ground when spotted, number of activities that the squirrel was doing, sound that the squirrel makes, and whether squirrel is disturbed by human activities (as measured by features like approaching or running away from humans and tail signs) could have a relationship with the attitude of the squirrel (whether indifferent or not).

Data description

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Initial exploratory data analysis

...

Analysis approach

...

Data dictionary

The data dictionary can be found [here](#) [Update the link and remove this note!]