Эссе о классификации пчёл
An Exploration of Complexity

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PLACEHOLDER
LOGO

Аннотация

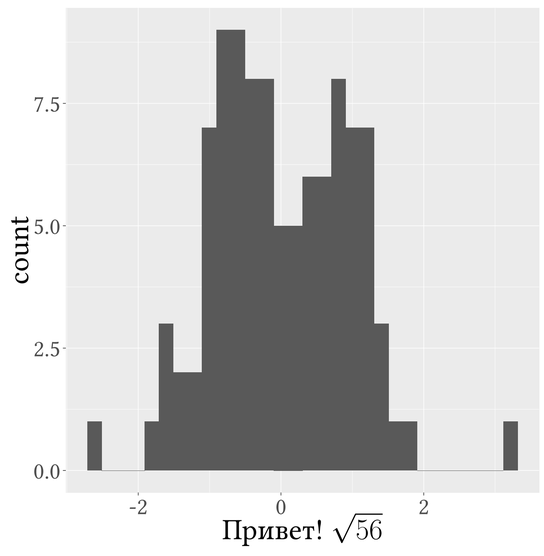
Сопелка! Sed fringilla tempus hendrerit. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Etiam ut elit sit amet metus lobortis consequat sit amet in libero. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus vel sem magna. Nunc at convallis urna. isus ante. Pellentesque condimentum dui. Etiam sagittis purus non tellus tempor volutpat. Donec et dui non massa tristique adipiscing. Quisque vestibulum eros eu. Phasellus imperdiet, tortor vitae congue bibendum, felis enim sagittis lorem, et volutpat ante orci sagittis mi. Morbi rutrum laoreet semper. Morbi accumsan enim nec tortor consectetur non commodo nisi sollicitudin. Proin sollicitudin. Pellentesque eget orci eros. Fusce ultricies, tellus et pellentesque fringilla, ante massa luctus libero, quis tristique purus urna nec nibh.

Introduction

```
library("ggplot2")
library("xtable")
library("texreg")
```

```
qplot(rnorm(100), xlab = "Привет! $\\sqrt{56}$")
```

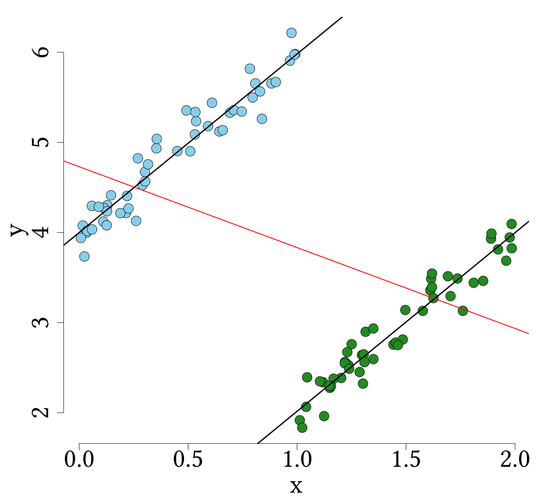
```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```




```
n <- 100;
s <- rep(c(0, 4), c(n/2, n/2));
x <- c(1 + runif(n/2), runif(n/2));
y <- 2 * x + s + rnorm(n, sd = 0.15)

plot(x, y, type = "n", frame = "FALSE")
points(x[1 : (n/2)], y[1 : (n/2)], pch = 21,
       col = "black", bg = "ForestGreen", cex = 2)
points(x[(n/2 + 1) : n], y[(n/2 + 1) : n],
       pch = 21, col = "black", bg = "SkyBlue", cex = 2)

modelV1 <- lm(y ~ x + s)
# модели по 1:100 и 101:200 в отдельности
abline(coef(modelV1)[1], coef(modelV1)[2], lwd = 3)
abline(coef(modelV1)[1] + 4 * coef(modelV1)[3],
       coef(modelV1)[2], lwd = 3)
modelV2 <- lm(y ~ x)
# общая модель
abline(modelV2, lwd = 2, col = "red")
```



Aliquam auctor, metus id ultrices porta, risus enim cursus sapien, quis iaculis sapien tortor sed odio. Mauris ante orci, euismod vitae tincidunt eu, porta ut neque. Aenean sapien est, viverra vel lacinia nec, venenatis eu nulla. Maecenas ut nunc nibh, et tempus libero. Aenean vitae risus ante. Pellentesque condimentum dui. Etiam sagittis purus non tellus tempor volutpat. Donec et dui non massa tristique adipiscing.

Main Objectives

1. Lorem ipsum dolor sit amet, consectetur.
2. Nullam at mi nisl. Vestibulum est purus, ultricies cursus volutpat sit amet, vestibulum eu.
3. Praesent tortor libero, vulputate quis elementum a, iaculis.
4. Phasellus a quam mauris, non varius mauris. Fusce tristique, enim tempor varius porta, elit purus commodo velit, pretium mattis ligula nisl nec ante.

Materials and Methods

Fusce magna risus, molestie ut porttitor in, consectetur sed mi. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Pellentesque consectetur blandit pellentesque. Sed odio justo, viverra nec porttitor vel, lacinia a nunc. Suspendisse pulvinar euismod arcu, sit amet accumsan enim fermentum quis. In id mauris ut dui feugiat egestas. Vestibulum ac turpis lacinia nisl commodo sagittis eget sit amet sapien.

Mathematical Section

Nulla vel nisl sed mauris auctor mollis non sed.

$$E = mc^2 \tag{1}$$

Curabitur mi sem, pulvinar quis aliquam rutrum. (1) edf (2) , $\Omega = [-1, 1]^3$, maecenas leo est, ornare at. $z = -1$ edf $z = 1$ sed interdum felis dapibus sem. x set y ytruem. Turpis j amet accumsan enim y-lacina; ref k-viverra nec porttitor x-lacina.

Vestibulum ac diam a odio tempus congue. Vivamus id enim nisi:

```
model_A <- lm(data = cars, dist ~ speed)
model_B <- lm(data = cars, dist ~ speed + I(speed^2))
```

Описание одной модели:

```
xtable_A <- xtable(model_A)
print(xtable_A, floating = FALSE)
```

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-17.5791	6.7584	-2.60	0.0123
speed	3.9324	0.4155	9.46	0.0000

Сравнение двух моделей:

```
texreg(list(model_A, model_B), table = FALSE,
    custom.coef.names = c(NA, NA, "speed$^2$"))
```

	Model 1	Model 2
(Intercept)	−17.58*	2.47
	(6.76)	(14.82)
speed	3.93***	0.91
	(0.42)	(2.03)
speed^2		0.10
		(0.07)
R^2	0.65	0.67
Adj. R^2	0.64	0.65
Num. obs.	50	50
RMSE	15.38	15.18

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Nulla sed arcu arcu. Duis et ante gravida orci venenatis tincidunt. Fusce vitae lacinia metus. Pellentesque habitant morbi. A$\underline{\xi} = \underline{\beta}$ Vim $\underline{\xi}$ enum nidi $3(P + 2)^2$ lacina. Id feugain **A** nun quis; magno.

Results

Donec faucibus purus at tortor egestas eu fermentum dolor facilisis. Maecenas tempor dui eu neque fringilla rutrum. Mauris *lobortis* nisl accumsan. Aenean vitae risus ante. Phasellus imperdiet, tortor vitae congue bibendum, felis enim sagittis lorem, et volutpat ante orci sagittis mi. Morbi rutrum laoreet semper. Morbi accumsan enim nec

Treatments	Response 1	Response 2
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.[illegible]

Таблица 1: Table caption

Placeholder

Image

Рис. 1: Figure caption

In hac habitasse platea dictumst. Etiam placerat, risus ac.

Adipiscing lectus in magna blandit:

Treatments	Response 1	Response 2
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.296

Таблица 2: Table caption

Vivamus sed nibh ac metus tristique tristique a vitae ante. Sed lobortis mi ut arcu fringilla et adipiscing ligula rutrum. Aenean turpis velit, placerat eget tincidunt nec, ornare in nisl. In placerat.

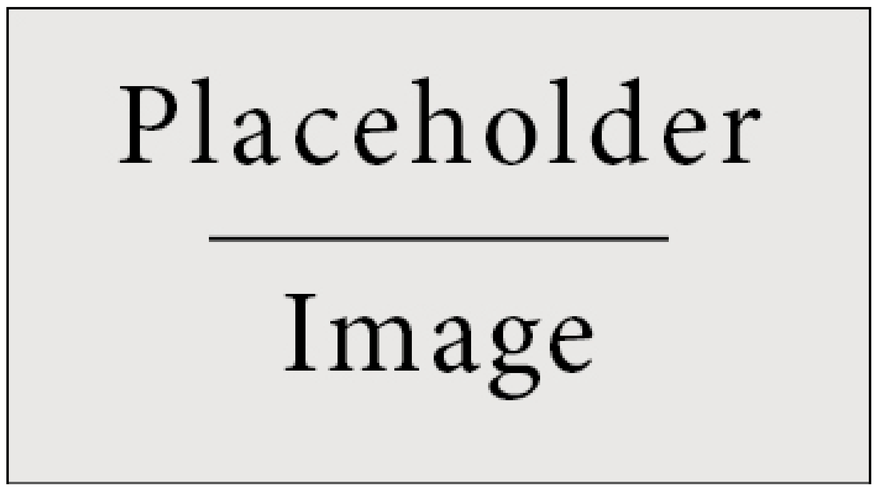


Рис. 2: Figure caption

Conclusions

Forthcoming Research

Список литературы

[1] A. B. Jones and J. M. Smith. Article Title. *Journal title*, 13(52):123–456, March 2013.

[2] J. M. Smith and A. B. Jones. *Book Title*. Publisher, 7th edition, 2012.