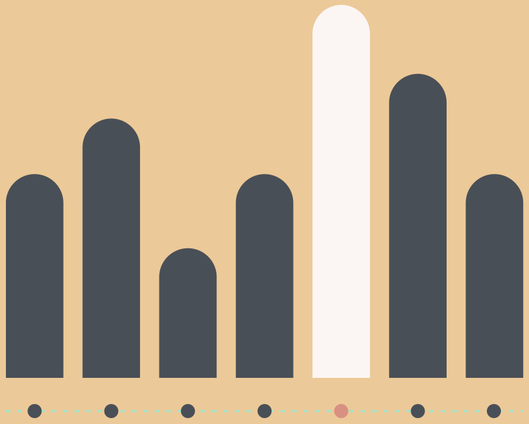
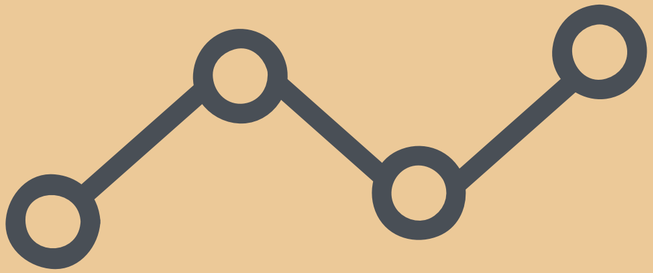
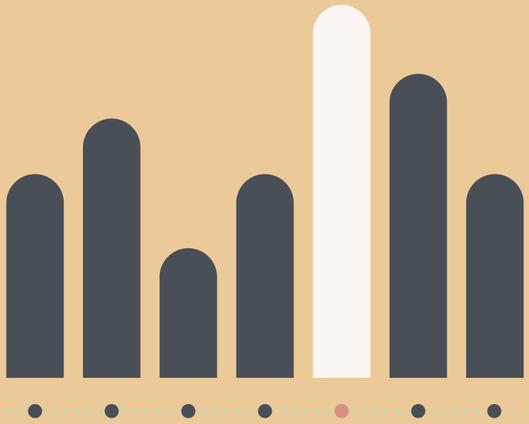
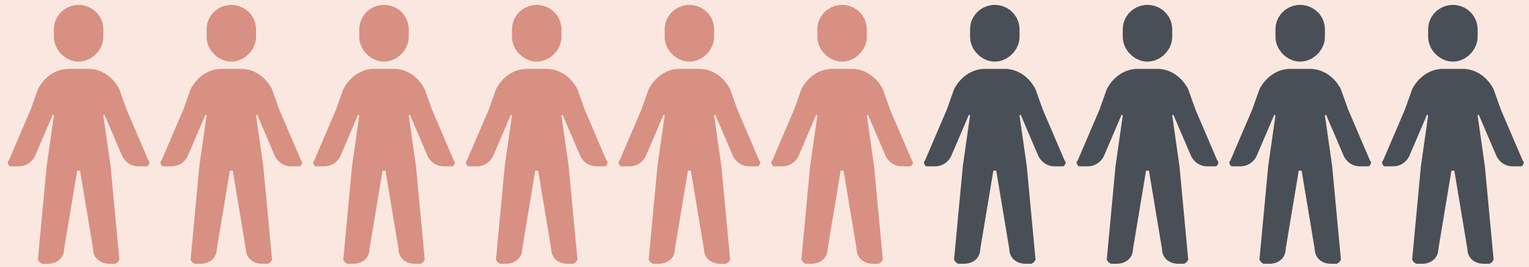
STATISTIKA



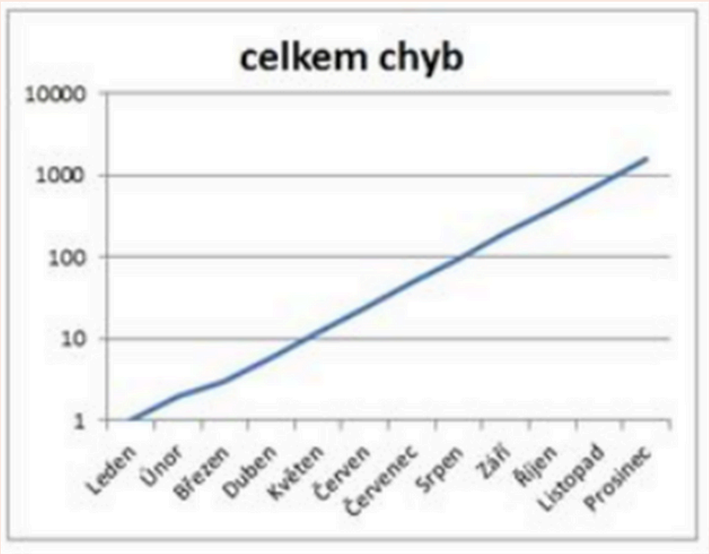






Komu je předmět určený?

- VŠ obory
- práce s daty
- vědecké myšlení
- chyba v grafu



Lineární trend růstu počtu chyb v programu během roku

DrainI(1)	DrainV(1)	GateI(1)	GateV(1)	DrainI(2)	DrainV(2)	GateI(2)	GateV(2)	DrainI(3)	DrainV(3)	GateI(3)	GateV(3)	DrainI(4)	DrainV(4)	GateI(4)	GateV(4)	DrainI(5)	DrainV(5)	GateI(5)	GateV(5)
3.29E-07	0.00E+00	1.52E-07	1.00E+00	2.97E-07	0.00E+00	1.57E-07	9.00E-01	2.57E-07	0.00E+00	1.83E-07	8.00E-01	2.19E-07	0.00E+00	1.62E-07	7.00E-01	1.83E-07	0.00E+00	1.42E-07	6.00E-01
4.33E-06	1.00E-02	1.93E-07	1.00E+00	4.24E-06	1.00E-02	1.77E-07	9.00E-01	4.14E-06	1.00E-02	1.72E-07	8.00E-01	4.01E-06	1.00E-02	1.88E-07	7.00E-01	3.87E-06	1.00E-02	1.52E-07	6.00E-01
1.27E-05	2.00E-02	1.47E-07	1.00E+00	1.22E-05	2.00E-02	1.22E-07	9.00E-01	1.17E-05	2.00E-02	1.52E-07	8.00E-01	1.11E-05	2.00E-02	1.88E-07	7.00E-01	1.05E-05	2.00E-02	2.18E-07	6.00E-01
1.91E-05	3.00E-02	1.42E-07	1.00E+00	1.83E-05	3.00E-02	1.62E-07	9.00E-01	1.75E-05	3.00E-02	1.62E-07	8.00E-01	1.66E-05	3.00E-02	1.47E-07	7.00E-01	1.56E-05	3.00E-02	1.62E-07	6.00E-01
2.55E-05	4.00E-02	1.32E-07	1.00E+00	2.44E-05	4.00E-02	8.11E-08	9.00E-01	2.33E-05	4.00E-02	2.38E-07	8.00E-01	2.21E-05	4.00E-02	1.62E-07	7.00E-01	2.08E-05	4.00E-02	1.27E-07	6.00E-01
3.18E-05	5.00E-02	1.01E-07	1.00E+00	3.05E-05	5.00E-02	1.27E-07	9.00E-01	2.91E-05	5.00E-02	1.52E-07	8.00E-01	2.76E-05	5.00E-02	1.22E-07	7.00E-01	2.60E-05	5.00E-02	1.98E-07	6.00E-01
3.81E-05	6.00E-02	1.01E-07	1.00E+00	3.66E-05	6.00E-02	1.17E-07	9.00E-01	3.49E-05	6.00E-02	1.62E-07	8.00E-01	3.31E-05	6.00E-02	1.52E-07	7.00E-01	3.11E-05	6.00E-02	1.52E-07	6.00E-01
4.45E-05	7.00E-02	6.08E-08	1.00E+00	4.26E-05	7.00E-02	1.72E-07	9.00E-01	4.07E-05	7.00E-02	1.62E-07	8.00E-01	3.85E-05	7.00E-02	1.06E-07	7.00E-01	3.62E-05	7.00E-02	1.17E-07	6.00E-01
5.07E-05	8.00E-02	1.52E-07	1.00E+00	4.86E-05	8.00E-02	1.17E-07	9.00E-01	4.64E-05	8.00E-02	1.52E-07	8.00E-01	4.39E-05	8.00E-02	1.98E-07	7.00E-01	4.13E-05	8.00E-02	1.57E-07	6.00E-01
5.71E-05	9.00E-02	1.62E-07	1.00E+00	5.47E-05	9.00E-02	1.22E-07	9.00E-01	5.21E-05	9.00E-02	1.62E-07	8.00E-01	4.94E-05	9.00E-02	1.88E-07	7.00E-01	4.63E-05	9.00E-02	1.67E-07	6.00E-01
6.34E-05	1.00E-01	7.61E-08	1.00E+00	6.07E-05	1.00E-01	1.72E-07	9.00E-01	5.79E-05	1.00E-01	1.93E-07	8.00E-01	5.47E-05	1.00E-01	2.03E-07	7.00E-01	5.14E-05	1.00E-01	1.62E-07	6.00E-01
6.97E-05	1.10E-01	1.57E-07	1.00E+00	6.68E-05	1.10E-01	1.47E-07	9.00E-01	6.36E-05	1.10E-01	1.42E-07	8.00E-01	6.01E-05	1.10E-01	2.43E-07	7.00E-01	5.65E-05	1.10E-01	1.27E-07	6.00E-01
7.60E-05	1.20E-01	1.27E-07	1.00E+00	7.29E-05	1.20E-01	1.47E-07	9.00E-01	6.93E-05	1.20E-01	1.37E-07	8.00E-01	6.56E-05	1.20E-01	1.77E-07	7.00E-01	6.15E-05	1.20E-01	1.32E-07	6.00E-01
8.24E-05	1.30E-01	1.06E-07	1.00E+00	7.88E-05	1.30E-01	1.32E-07	9.00E-01	7.51E-05	1.30E-01	1.47E-07	8.00E-01	7.09E-05	1.30E-01	1.83E-07	7.00E-01	6.64E-05	1.30E-01	1.57E-07	6.00E-01
8.86E-05	1.40E-01	1.12E-07	1.00E+00	8.48E-05	1.40E-01	1.42E-07	9.00E-01	8.07E-05	1.40E-01	1.42E-07	8.00E-01	7.62E-05	1.40E-01	1.67E-07	7.00E-01	7.15E-05	1.40E-01	1.12E-07	6.00E-01
9.50E-05	1.50E-01	1.06E-07	1.00E+00	9.09E-05	1.50E-01	1.83E-07	9.00E-01	8.64E-05	1.50E-01	1.62E-07	8.00E-01	8.16E-05	1.50E-01	2.38E-07	7.00E-01	7.64E-05	1.50E-01	1.47E-07	6.00E-01
1.01E-04	1.60E-01	1.01E-07	1.00E+00	9.68E-05	1.60E-01	1.93E-07	9.00E-01	9.21E-05	1.60E-01	2.18E-07	8.00E-01	8.69E-05	1.60E-01	1.06E-07	7.00E-01	8.13E-05	1.60E-01	1.32E-07	6.00E-01
1.08E-04	1.70E-01	8.62E-08	1.00E+00	1.03E-04	1.70E-01	1.32E-07	9.00E-01	9.78E-05	1.70E-01	1.32E-07	8.00E-01	9.22E-05	1.70E-01	1.67E-07	7.00E-01	8.64E-05	1.70E-01	1.88E-07	6.00E-01
1.14E-04	1.80E-01	6.08E-08	1.00E+00	1.09E-04	1.80E-01	1.42E-07	9.00E-01	1.03E-04	1.80E-01	1.72E-07	8.00E-01	9.76E-05	1.80E-01	1.83E-07	7.00E-01	9.13E-05	1.80E-01	1.93E-07	6.00E-01
1.20E-04	1.90E-01	1.22E-07	1.00E+00	1.15E-04	1.90E-01	1.22E-07	9.00E-01	1.09E-04	1.90E-01	1.57E-07	8.00E-01	1.03E-04	1.90E-01	2.33E-07	7.00E-01	9.61E-05	1.90E-01	1.57E-07	6.00E-01
1.27E-04	2.00E-01	1.32E-07	1.00E+00	1.21E-04	2.00E-01	1.32E-07	9.00E-01	1.15E-04	2.00E-01	1.12E-07	8.00E-01	1.08E-04	2.00E-01	2.43E-07	7.00E-01	1.01E-04	2.00E-01	1.47E-07	6.00E-01
1.33E-04	2.10E-01	1.77E-07	1.00E+00	1.27E-04	2.10E-01	1.32E-07	9.00E-01	1.20E-04	2.10E-01	1.32E-07	8.00E-01	1.13E-04	2.10E-01	1.57E-07	7.00E-01	1.06E-04	2.10E-01	1.83E-07	6.00E-01
1.39E-04	2.20E-01	1.42E-07	1.00E+00	1.33E-04	2.20E-01	1.37E-07	9.00E-01	1.26E-04	2.20E-01	1.88E-07	8.00E-01	1.19E-04	2.20E-01	1.88E-07	7.00E-01	1.11E-04	2.20E-01	1.52E-07	6.00E-01
1.45E-04	2.30E-01	1.32E-07	1.00E+00	1.39E-04	2.30E-01	1.88E-07	9.00E-01	1.32E-04	2.30E-01	1.62E-07	8.00E-01	1.24E-04	2.30E-01	1.52E-07	7.00E-01	1.16E-04	2.30E-01	1.57E-07	6.00E-01
1.52E-04	2.40E-01	1.22E-07	1.00E+00	1.45E-04	2.40E-01	1.88E-07	9.00E-01	1.37E-04	2.40E-01	1.77E-07	8.00E-01	1.29E-04	2.40E-01	1.32E-07	7.00E-01	1.20E-04	2.40E-01	1.42E-07	6.00E-01
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1.64E-04	2.60E-01	1.12E-07	1.00E+00	1.57E-04	2.60E-01	1.77E-07	9.00E-01	1.49E-04	2.60E-01	1.47E-07	8.00E-01	1.39E-04	2.60E-01	1.72E-07	7.00E-01	1.30E-04	2.60E-01	1.12E-07	6.00E-01
1.71E-04	2.70E-01	9.13E-08	1.00E+00	1.63E-04	2.70E-01	1.52E-07	9.00E-01	1.54E-04	2.70E-01	1.57E-07	8.00E-01	1.45E-04	2.70E-01	1.12E-07	7.00E-01	1.35E-04	2.70E-01	1.67E-07	6.00E-01
1.77E-04	2.80E-01	1.01E-07	1.00E+00	1.69E-04	2.80E-01	1.42E-07	9.00E-01	1.60E-04	2.80E-01	1.52E-07	8.00E-01	1.50E-04	2.80E-01	1.06E-07	7.00E-01	1.39E-04	2.80E-01	1.52E-07	6.00E-01
1.83E-04	2.90E-01	1.17E-07	1.00E+00	1.75E-04	2.90E-01	1.12E-07	9.00E-01	1.65E-04	2.90E-01	1.37E-07	8.00E-01	1.55E-04	2.90E-01	9.63E-08	7.00E-01	1.44E-04	2.90E-01	1.77E-07	6.00E-01
1.90E-04	3.00E-01	6.59E-08	1.00E+00	1.81E-04	3.00E-01	1.57E-07	9.00E-01	1.71E-04	3.00E-01	1.72E-07	8.00E-01	1.60E-04	3.00E-01	1.17E-07	7.00E-01	1.49E-04	3.00E-01	1.57E-07	6.00E-01
1.96E-04	3.10E-01	6.08E-08	1.00E+00	1.87E-04	3.10E-01	1.32E-07	9.00E-01	1.76E-04	3.10E-01	1.27E-07	8.00E-01	1.65E-04	3.10E-01	1.06E-07	7.00E-01	1.54E-04	3.10E-01	1.22E-07	6.00E-01
2.02E-04	3.20E-01	1.01E-07	1.00E+00	1.92E-04	3.20E-01	1.12E-07	9.00E-01	1.82E-04	3.20E-01	1.06E-07	8.00E-01	1.70E-04	3.20E-01	8.11E-08	7.00E-01	1.58E-04	3.20E-01	1.37E-07	6.00E-01
2.09E-04	3.30E-01	1.01E-07	1.00E+00	1.99E-04	3.30E-01	1.22E-07	9.00E-01	1.87E-04	3.30E-01	1.27E-07	8.00E-01	1.75E-04	3.30E-01	1.12E-07	7.00E-01	1.63E-04	3.30E-01	1.47E-07	6.00E-01
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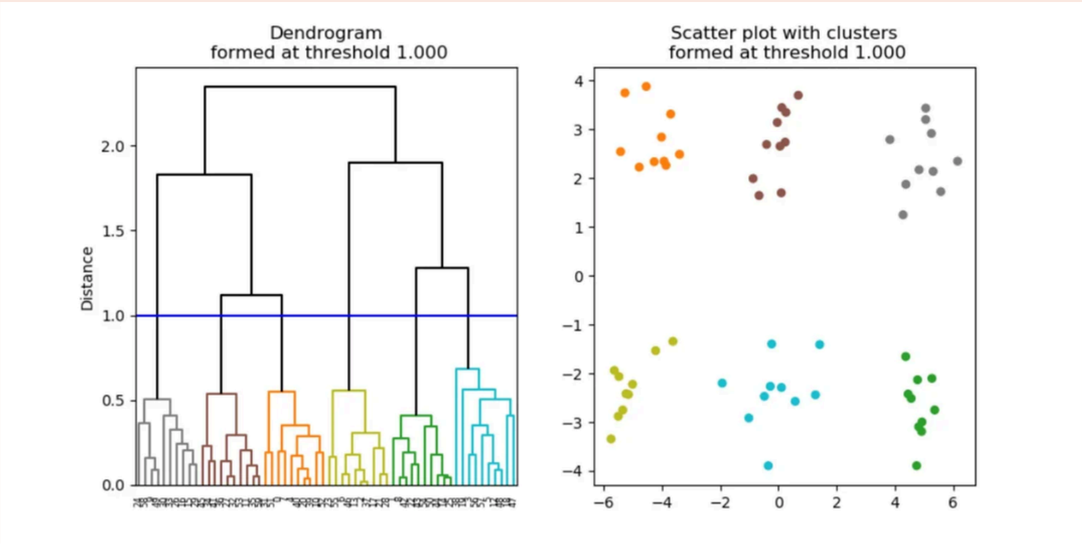
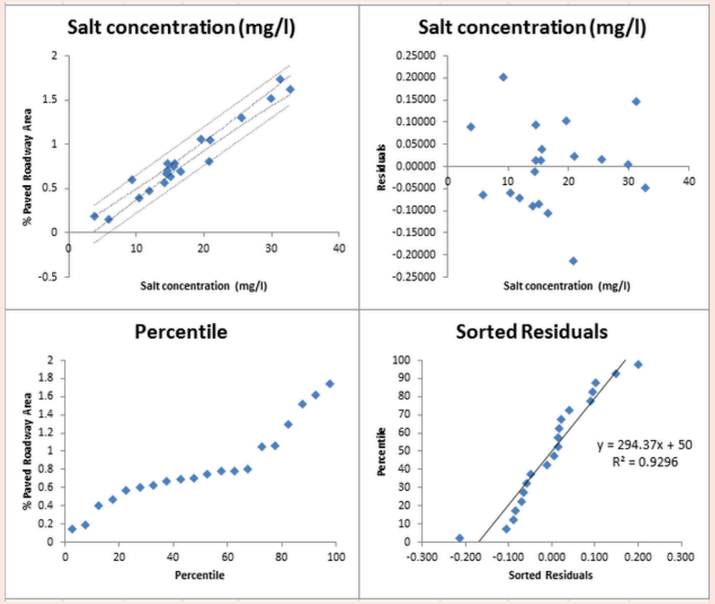
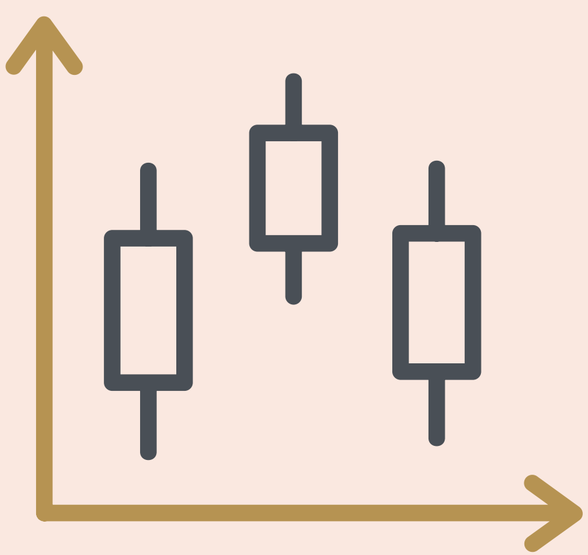
2.34E-04	3.70E-01	1.06E-07	1.00E+00	2.22E-04	3.70E-01	2.48E-07	9.00E-01	2.09E-04	3.70E-01	1.88E-07	8.00E-01	1.96E-04	3.70E-01	1.42E-07	7.00E-01	1.81E-04	3.70E-01	2.08E-07	6.00E-01
2.40E-04	3.80E-01	9.63E-08	1.00E+00	2.28E-04	3.80E-01	1.32E-07	9.00E-01	2.15E-04	3.80E-01	1.22E-07	8.00E-01	2.01E-04	3.80E-01	9.63E-08	7.00E-01	1.86E-04	3.80E-01	1.77E-07	6.00E-01

Co se naučíte?

Zpracovávat rozsáhlé datové soubory.

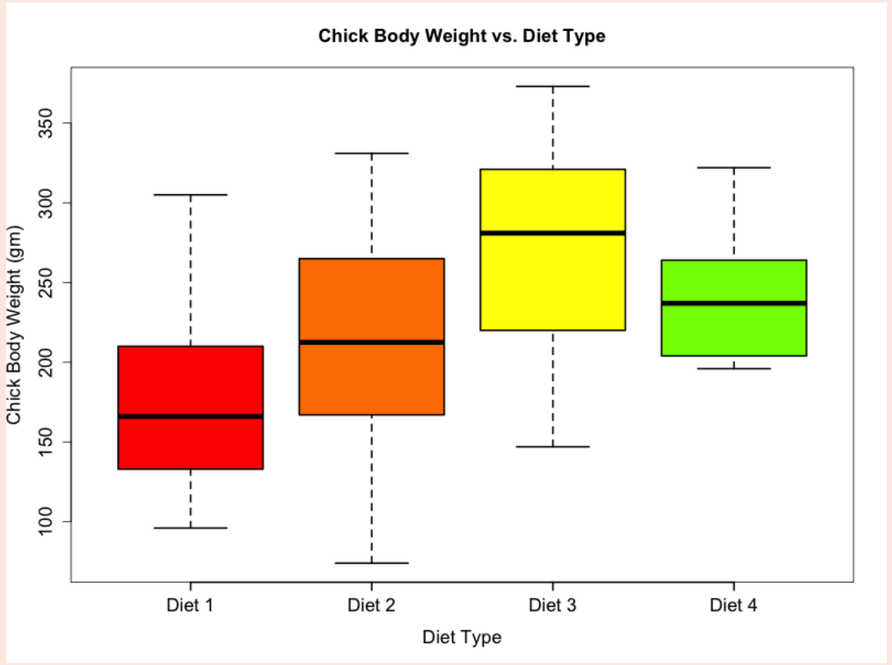


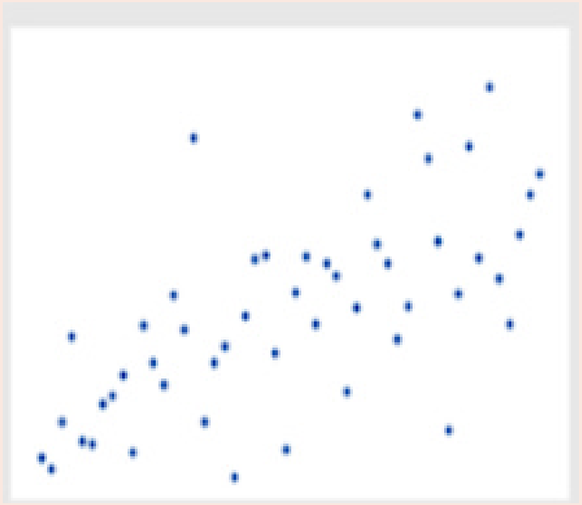




Co se naučíte?

Tvořit a interpretovat různé grafy





Co se naučíte?

Říci, kde objektivně existuje rozdíl nebo vztah.

r the Representation and Acquisition
Selectional Preferences

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learn appropriate verb profiles from a small set of noisy training data, and can use them in simulating human plausibility judgments and analyzing implicit object alternation.

1 Introduction

Verbs have preferences for the semantic properties of the arguments filling a particular role. For example, the verb *eat* expects that the object receiving its theme role will have the property of being edible, among others. Learning verb selectional preferences is an important aspect of human language acquisition, and the acquired preferences have been shown to guide children's expectations about missing or upcoming arguments in language comprehension (Nation et al., 2003).

Resnik (1996) introduced a statistical approach to learning and use of verb selectional preferences. In this framework, a semantic class hierarchy for words is used, together with statistical tools, to induce a verb's selectional preferences for a particular argument position in the form of a distribution over all the classes that can occur in that position. Resnik's model was proposed as a model of human learning of selectional preferences that made minimal representational assumptions; it showed how such preferences could be acquired from usage data and an existing conceptual hierarchy. However, his and later computational models (see Section 2) have properties that do not match with certain cognitive plausibility criteria for a child language acquisition model. All these models use the training data in "batch mode", and most of them use information theoretic measures that rely on total counts from a corpus. Therefore, it is not clear how the representation of selectional preferences could be updated incrementally in these models as the person receives more data. Moreover, the assumption that children have access to a full hierarchical representation of semantic classes may be too strict. We propose an alternative view in this paper which is more plausible in the context of child language acquisition.

In previous work (Alishahi and Stevenson, 2005), we have proposed a usage-based computational model of early verb learning that uses Bayesian clustering and prediction to model language acquisition and use. Individual verb usages are incrementally grouped to form emergent classes of linguistic constructions that share semantic and syntactic properties. We have shown that our Bayesian model can incrementally acquire a general conception of the semantic roles of predicates based only on exposure to individual verb usages (Alishahi and Stevenson, 2007). The model forms probabilistic associations between the semantic properties of arguments, their syntactic positions, and the semantic primitives

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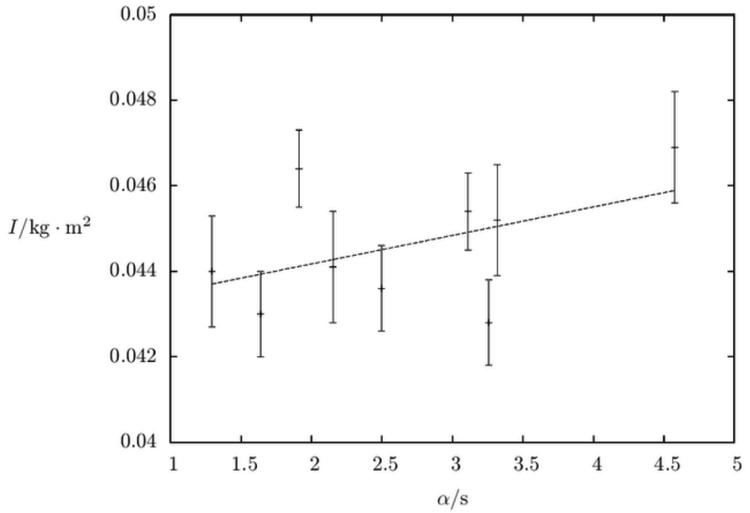
Co se naučíte?

Napsat odborný text a orientovat se v něm.



Obrázek 2: Závislost nekorigovaného momentu setrvačnosti I na parametru α

H_0 : The proportions of elements that belong to different categories are the same in two or more different populations

H_1 : The proportions of elements that belong to different categories are NOT the same in two or more different populations

(Note: Calculations and degrees of freedom same as for test of independence)

- **Confidence interval for population variance σ^2 :**

$$\frac{(n-1)s^2}{\chi^2_{\alpha/2}} \quad \text{to} \quad \frac{(n-1)s^2}{\chi^2_{1-\alpha/2}} \qquad df = n-1$$

where $s^2 = \dfrac{\sum x^2 - \dfrac{(\sum x)^2}{n}}{n-1}$

(Note: Confidence interval for population standard deviation is found by taking square roots of confidence interval for population variance.)

- **Test of hypotheses about σ^2 :**

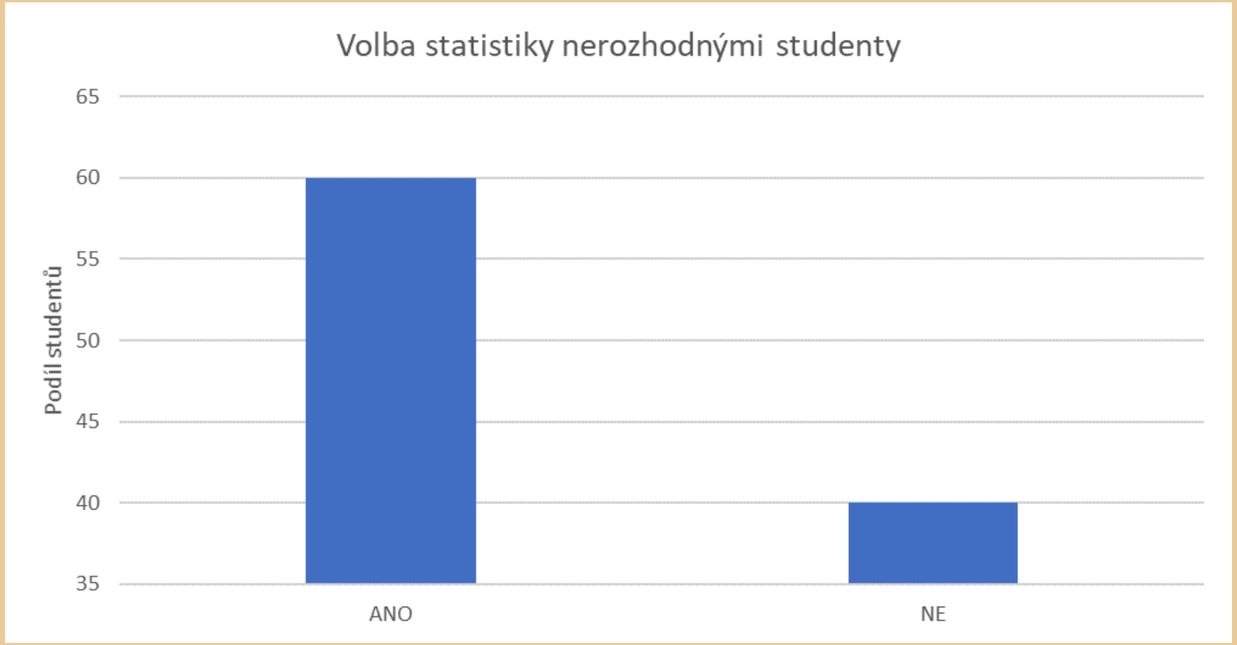
$$H_0: \sigma^2 = \sigma_0^2$$

$H_1: \sigma^2 < \sigma_0^2$ OR $H_1: \sigma^2 > \sigma_0^2$ OR $H_1: \sigma^2 \neq \sigma_0^2$

$$\chi^2_{observed} = \frac{(n-1)s^2}{\sigma^2} \qquad df = n-1$$

Co se naučíte?

Základy všeho, co budete potřebovat ve VŠ statistice (a možná i něco navíc).



Nejste rozhodnutí?

Rozhodněte se jako výrazná většina nerozhodnutých v minulých letech!