Regression + Assignment 1
(Neural Networks Implementation and Application Tutorial)

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Overview

- Assignment 1
- Regression
- Assignment 2

Assignment 1

Organization

- Late submissions (>10mins) will not be accepted unless previously agreed upon
- Other questions?
- How long did it take?

- *Tutor cue:* go through the assignment
- Questions?
- Did it work?
- Were you able to collaborate?

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Which of the following are regression (and linear/polynomial) models? 🧐 1. 5

2. $4 \cdot x_1 + 5$
3. $4 \cdot x_1 + 3 \cdot x_2^2 + 5$
4. $4 \cdot x_1 + 3 \cdot x_1 \cdot x_2 + 5$
5. $4 \cdot x_1 + 3 \cdot \sin(x_2^2) + 5$
6. $\begin{cases} 4 \cdot x_1 + 5 & \text{if } x_2 \geq 10 \\ 3 \cdot x_1 + 4 & \text{if } x_2 < 10 \end{cases}$

Regression

Regression to Classification 🤔 🤔

Assume that we have a function that outputs a score for every class, e.g. *Predict sentiment into (positive, negative, neutral)*:

$$(15.0, -2.3, 4.1)$$

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- How do we use this for classification?
    - Argmax
- Can we get a probability distribution?
    - Softmax: $\frac{\exp x_i}{\sum_k \exp x_k}$

Assignment 2

- Any questions?

Resources

TODO