



Algorytm rzutowania obrazu boiska piłkarskiego uzyskanego z ruchomej kamery na płaszczyznę niewymagający wstępnej kalibracji

West Pomeranian University of Technology, Szczecin Poland

Karol Działowski

Promotor: dr. hab. inż. Pawła Forczmańskiego, prof. ZUT

Cel pracy: stworzenie algorytmu rzutowania trójwymiarowej sceny przedstawiającej boisko piłkarskie na płaszczyznę. Obraz boiska pozyskany jest za pomocą ruchomej kamery o sześciu stopniach swobody (zmiana pozycji XYZ, zmiany odpowiednich kątów patrzenia)

Blind Text

Structuring
Elements

Numerals and
Mathematics

Figures and
Code Listings

Citations and
Bibliography





Jabberwocky

Lewis Carroll

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'Twas brillig, and the slithy toves
Did gyre and gimble in the wabe;
All mimsy were the borogoves,
And the mome raths outgrabe.

“Beware the Jabberwock, my son!
The jaws that bite, the claws that
Beware the Jubjub bird, and shun
The frumious Bandersnatch!”





Lists and locales

Lorem ipsum dolor sit amet

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- Nulla nec lacinia odio.
Curabitur urna tellus.
 - Fusce id sodales dolor. Sed id metus dui.
 - » Cupio virtus licet mi vel feugiat.
 - Nulla nec lacinia odio.
Curabitur urna tellus.
 - Nulla nec lacinia odio.
Curabitur urna tellus.
1. Donec porta, risus porttitor egestas scelerisque video.
 2. Donec porta, risus porttitor egestas scelerisque video.

Tutaj jakiś fajny tekst po polsku, żeby nie było, że nie da się pisać po polsku z polskimi znakami. The quick, brown fox jumps over a lazy dog.





Text blocks

In plain, example, and alert flavour

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This text is highlighted.

A plain block

This is a plain block containing some highlighted text.

An example block

This is an example block containing some highlighted text.

An alert block

This is an alert block containing some highlighted text.





Definitions, theorems, and proofs

All integers divide zero

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Definition

$$\forall a, b \in \mathbb{Z} : a \mid b \iff \exists c \in \mathbb{Z} : a \cdot c = b$$

Theorem

$$\forall a \in \mathbb{Z} : a \mid 0$$

Dowód.

$$\forall a \in \mathbb{Z} : a \cdot 0 = 0$$





Numerals and Mathematics

Formulae, equations, and expressions

Blind Text

$$1234567 \quad 1234567 \quad \hat{x}, \check{x}, \tilde{a}, \bar{a}, \quad \iint f(x, y, z) dx dy dz$$

$$\dot{y}, \ddot{y}$$

Structuring
Elements

$$\frac{1}{1 + \frac{1}{2 + \frac{1}{3 + x}}} + \frac{1}{1 + \frac{1}{2 + \frac{1}{3 + x}}} \quad F : \begin{vmatrix} F''_{xx} & F''_{xy} & F'_x \\ F''_{yx} & F''_{yy} & F'_y \\ F'_x & F'_y & 0 \end{vmatrix} = 0$$

Numerals and
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$$\iint_{x \in \mathbb{R}^2} \langle x, y \rangle dx \quad \frac{\overline{\overline{\overline{a\alpha^2 + b\beta + d\delta}}}}{]0, 1[+ [x] - \langle x, y \rangle}$$

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Bibliography

$$e^x \approx 1 + x + x^2/2! + \binom{n+1}{k} = \binom{n}{k} + \binom{n}{k-1} + x^3/3! + x^4/4!$$





Figures

Tables, graphs, and images

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Faculty	With T _E X	Total	%
Faculty of Informatics	1 716	2 904	59.09
Faculty of Science	786	5 275	14.90
Faculty of Economics and Administration	64	4 591	1.39
Faculty of Arts	69	10 000	0.69
Faculty of Medicine	8	2 014	0.40
Faculty of Law	15	4 824	0.31
Faculty of Education	19	8 219	0.23
Faculty of Social Studies	12	5 599	0.21
Faculty of Sports Studies	3	2 062	0.15

Tablica: The distribution of theses written using T_EX during 2010–15 at MU



Figures

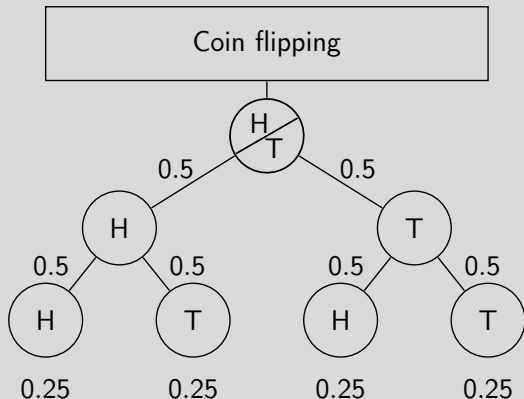
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Rysunek: Tree of probabilities – Flipping a coin¹



Code listings what happens if the title is longer?

An example source code in C

```
#include <stdio.h>
#include <unistd.h>
#include <sys/types.h>
#include <sys/wait.h>

// This is a comment
int main(int argc, char **argv)
{
    while (--c > 1 && !fork());
    sleep(c = atoi(v[c]));
    printf("%d\n", c);
    wait(0);
    return 0;
}
```

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Algorithm 1 Text Summarization Algorithm

1: **procedure** Summary Construction

Input: Text Document.

Output: Summary sentences.

2: Creating information table from a text document.

3: Generate matrices.

4: **Call Procedure:** Reduct Construction [Algorithm 2]

5: **Return:** Summary sentences

6: **end procedure**



RealBoost algorithm

With narrow margins

Algorithm 2 Algorithm RealBoost

- 1: **procedure** RealBoost(D)
- 2: Rozpocznij od jednostajnego rozkładu wag: $w_i := 1/m, i = 1, \dots, m$.
- 3: **for** $t := 1, \dots, T$ **do**
- 4: Naucz klasyfikator $f_t(x) \in \mathbb{R}$ na danych uczących używając wag w_i , tak aby f_t minimalizowało *kryterium wykładnicze* $\sum_{i=1}^m w_i e^{-f_t(x_i)y_i}$ lub równoważnie aby f_t było przybliżeniem połowy przekształcenia logit:
$$f_t(x) := 1/2 \ln \left\{ \widehat{P}_w(y = 1 | x) \sqrt{P}_w(y = -1 | x) \right\}$$
- 5: Aktualizuj wagi przykładów wg:
$$Z_t := \sum_{i=1}^m w_i e^{-f_t(x_i)y_i}$$
$$w_i := w_i e^{-f_t(x_i)y_i} / Z_t, \quad i = 1, \dots, m$$
- 6: **end for**
- 7: **return** zbiorowy klasyfikator $F(x) := \sum_{t=1}^T f_t(x)$ z decyzją obliczaną jako $\text{sgn } F(x)$.
- 8: **end procedure**

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Citations

$T_{E}X$, \LaTeX , and Beamer

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$T_{E}X$ is a programming language for the typesetting of documents. It was created by Donald Erwin Knuth in the late 1970s and it is documented in *The $T_{E}X$ book* [1]. In the early 1980s, Leslie Lamport created the initial version of \LaTeX , a high-level language on top of $T_{E}X$, which is documented in *\LaTeX : A Document Preparation System* [2]. There exists a healthy ecosystem of packages that extend the base functionality of \LaTeX ; *The \LaTeX Companion* [3] acts as a guide through the ecosystem. In 2003, Till Tantau created the initial version of Beamer, a \LaTeX package for the creation of presentations. Beamer is documented in the *User's Guide to the Beamer Class* [4].





Bibliography

T_EX, *L_AT_EX*, and Beamer

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Bibliography

- [1] Donald E. Knuth. *The T_EXbook*. Addison-Wesley, 1984.
- [2] Leslie Lamport. *L_AT_EX: A Document Preparation System*. Addison-Wesley, 1986.
- [3] M. Goossens, F. Mittelbach, and A. Samarin. *The L_AT_EX Companion*. Addison-Wesley, 1994.
- [4] Till Tantau. *User's Guide to the Beamer Class Version 3.01*. Available at <http://latex-beamer.sourceforge.net>.
- [5] A. Mertz and W. Slough. Edited by B. Beeton and K. Berry. *Beamer by example* In TUGboat, Vol. 26, No. 1., pp. 68-73.

