Aprendizado de máquina a partir de redes neurais para detecção de fraudes em transações de cartões de crédito

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1. Introdução

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2. Revisão Sistemática

A revisão sistemática parte de uma questão clara que demonstre os objetivos do trabalho para, a partir deste ponto, definir estratégia de pesquisa, fontes de informações encon-

tradas e consideradas, processo de análise do material escolhido considerando vieses e resultados encontrados.

Este trabalho tem a seguinte questão norteadora: o processo de detecção de fraudes em transações de cartões de créditos pode ser realizado com assertividade a partir do aprendizado de máquina com base em redes neurais? A construção desse objetivo passa por entender se existem trabalhos semelhantes e que apenas utilizam de método diferente de modelagem dos dados, por isso o tipo de revisão sistemática aqui empregada será a de meta-análise.

Dessa forma, entendemos que a estratégia de pesquisa deve incluir os seguintes critérios de busca: detecção de fraudes, cartões de créditos, aprendizado de máquina. Os critérios de exclusão serão: *identificar os critérios de exclusão, provavelmente após leitura* .

3. Sections and Paragraphs

Section titles must be in boldface, 13pt, flush left. There should be an extra 12 pt of space before each title. Section numbering is optional. The first paragraph of each section should not be indented, while the first lines of subsequent paragraphs should be indented by 1.27 cm.

3.1. Subsections

The subsection titles must be in boldface, 12pt, flush left.

4. Figures and Captions

Figure and table captions should be centered if less than one line (Figure 1), otherwise justified and indented by 0.8cm on both margins, as shown in Figure 2. The caption font must be Helvetica, 10 point, boldface, with 6 points of space before and after each caption.

Figure 1. A typical figure

In tables, try to avoid the use of colored or shaded backgrounds, and avoid thick, doubled, or unnecessary framing lines. When reporting empirical data, do not use more

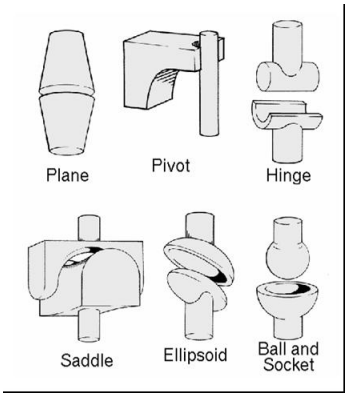

Figure 2. This figure is an example of a figure caption taking more than one line and justified considering margins mentioned in Section 4.

decimal digits than warranted by their precision and reproducibility. Table caption must be placed before the table (see Table 1) and the font used must also be Helvetica, 10 point, boldface, with 6 points of space before and after each caption.

Table 1. Variables to be considered on the evaluation of interaction techniques

	Chessboard top view	Chessboard perspective view
Selection with side movements	6.02 ± 5.22	7.01±6.84
Selection with in-depth movements	6.29±4.99	12.22±11.33
Manipulation with side movements	4.66± 4.94	3.47±2.20
Manipulation with in-depth movements	5.71 ±4.55	5.37 ±3.28

5. Images

All images and illustrations should be in black-and-white, or gray tones, excepting for the papers that will be electronically available (on CD-ROMs, internet, etc.). The image resolution on paper should be about 600 dpi for black-and-white images, and 150-300 dpi for grayscale images. Do not include images with excessive resolution, as they may take hours to print, without any visible difference in the result.

6. References

Bibliographic references must be unambiguous and uniform. We recommend giving the author names references in brackets, e.g. [Knuth 1984], [Boulic and Renault 1991], and [Smith and Jones 1999].

The references must be listed using 12 point font size, with 6 points of space before each reference. The first line of each reference should not be indented, while the subsequent should be indented by 0.5 cm.

References

Boulic, R. and Renault, O. (1991). 3d hierarchies for animation. In Magnenat-Thalmann, N. and Thalmann, D., editors, *New Trends in Animation and Visualization*. John Wiley & Sons ltd.

Knuth, D. E. (1984). *The TEX Book*. Addison-Wesley, 15th edition.

Smith, A. and Jones, B. (1999). On the complexity of computing. In Smith-Jones, A. B., editor, *Advances in Computer Science*, pages 555–566. Publishing Press.