Semi-Simple Sample Document

Ingeniería en Informática
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Contents

1 Forms to write text

Normal text

Text in bold (ctrl + b)

Text in italic (ctrl + i)

Text with footnote[1]

This is a cite[3].

1.1 Enumerate and itemize information

1. Enumerate one
2. Enumerate two
   (a) Sub-enumerate one
   (b) Sub-enumerate two

- item one
- item two
  - sub-item one
  - sub- item two

0. Start enumerate at 0
1. Enumerate one

2 Equations

2.1 Simple equations

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

$$f(x) = \begin{cases} 1 & \text{if x} > 0 \\ 0 & \text{if x} \leqslant 0 \end{cases} \tag{2}$$

2.2 Complex equations

$$\begin{aligned} \vec{h_1} &= f(\vec{x}\,.W_1) \\ \vec{h_2} &= f(\vec{h_1}\,.W_2) \\ \vec{h_3} &= f(\vec{h_2}\,.W_3) \\ \vec{y} &= f(\vec{h_3}\,.W_4) \end{aligned} \tag{3}$$

[1] This is a footnote.

$$MSE = \frac{1}{n}\sum_{i=1}^{n}(y_i - \hat{y}_i)^2 \tag{4}$$

$$\begin{pmatrix} a_0 & a_1 \\ a_2 & a_3 \end{pmatrix} \odot \begin{pmatrix} b_0 & b_1 \\ b_2 & b_3 \end{pmatrix} = \begin{pmatrix} a_0.b_0 & a_1.b_1 \\ a_2.b_2 & a_3.b_3 \end{pmatrix}$$

$$\frac{dL}{db_k} = \frac{dL}{dy_k}\frac{dy_k}{db_k} = \frac{dL}{dy_k}\frac{dy_k}{dz_k}\frac{dz_k}{db_k} = l'_{k+1} \odot f'_k \frac{d(W_k x_k + b_k)}{db_k}$$

2.2.1 Matrix

$$IoU(A, B) = \frac{|A \cap B|}{|A \cup B|} = \frac{|A \cap B|}{|A| + |B| - |A \cap B|} \tag{5}$$

3 Figures

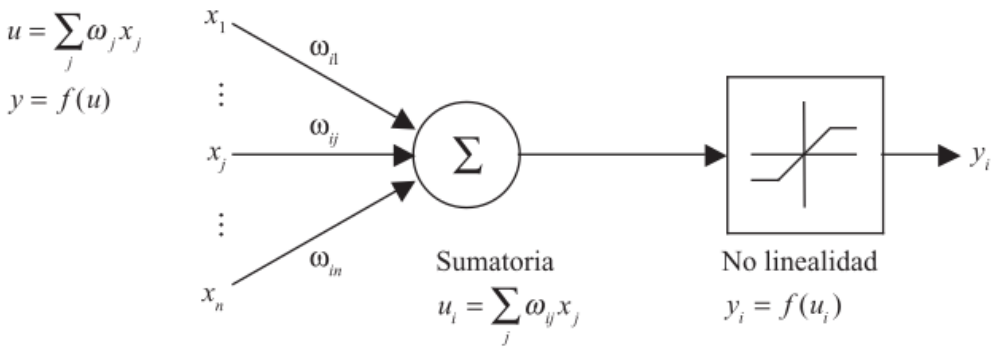
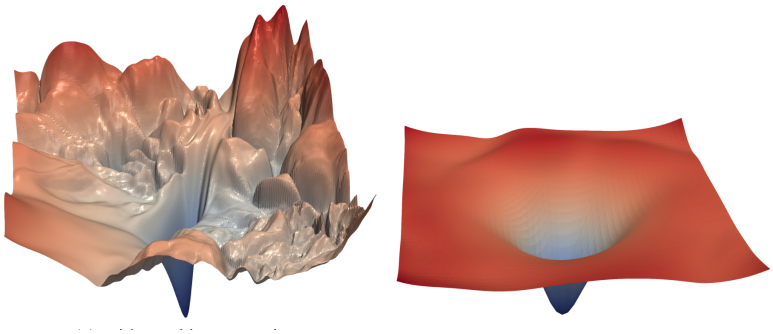


Figure 3.1: Perceptron diagram.

This is a reference for the image (figure 3.1) above.



(a) Figure one. (b) Figure two.

Figure 3.2: Both figures.

4 Tables

Data 1	185
Data 222	37
Data 333333	12
Data 4444444444	12
Data 555	13

Table 1: Table X.

	Number of people			Difference between	
Module	0	1	2	1 y 0	2 y 0
1	21.07	21.19	21.33	0.12	0.26
2	22.25	22.35	22.39	0.1	0.14
3	18.11	18.19	18.61	0.07	0.5
4	18.3	18.44	18.87	0.15	0.57
6	18.21	18.43	19.45	0.21	1.24

Table 2: Table Y.

Appendices

A First Appendix

This is an appendix

B Second Appendix

Text

References

[1] Iván Federico Kwist, Matías Loiseau, David Exequiel Contreras, Federico Gabriel D'Angiolo, Roberto Osvaldo Mayer. (2019). *Monitorización de un Datacenter mediante Protocolos de IoT*. Congreso Nacional de Ingeniería Informática – Sistemas de Información.

[2] Federico Gabriel D'Angiolo, Iván Federico Kwist, Matías Loiseau, David Exequiel Contreras, Fernando Asteasuain. (2019). *Algoritmos de Regresión Lineal aplicados al mantenimiento de un Datacenter*. Congreso Argentino de Ciencias de la Computación.

[3] Federico Gabriel D'Angiolo, Iván Federico Kwist, Matías Loiseau , David Exequiel Contreras, Gregorio Oscar Glas. (2019). *Algoritmo de KNN aplicado al mantenimiento de un Datacenter*. Congreso Nacional de Ingeniería Informática – Sistemas de Información.

[4] LeCun, Y., Bengio, Y., & Hinton, G. (2015). *Deep learning*. nature, 521(7553), 436-444.

[5] Zhao, Z. Q., Zheng, P., Xu, S. T., & Wu, X. (2019). *Object detection with deep learning: A review*. IEEE transactions on neural networks and learning systems, 30(11), 3212-3232.