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Plugins Usage Examples

Refnotes Plugin Usage Examples

These are examples of citations to books [1] and [2], a chapter on a smart companion [3], articles on IoT [4], blimps [5], cloud computing [6], gas emissions [7], pedestrian crossing behaviour [8], smart bicycles [9] and diaper moisture [10], and to Web resources [11], [12] and [13].

Please use superscript and subscript annotations to write powers and indexes, e.g., m^2 and CO_2 .

Caption Plugin Usage Examples

Table 1 illustrates a boxed table with default column widths and Table 2 with specific column widths.

Table 1: Boxed table

Abbreviation	Description
EPS	European Project Semester
ISEP	Instituto Superior de Engenharia do Porto
USB	Universal Serial Bus

Table 2: Boxed table with specific column widths

Abbreviation	Description
EPS	European Project Semester
ISEP	Instituto Superior de Engenharia do Porto
USB	Universal Serial Bus

Table 3 shows the execution time results for each API. Table 4 lists the fruit bought at the grocery.

Table 3: Time response

API	Time (s)
EJML	26
JAMA	295
JBLAS	29
MTJ	18
WEKA	123

Table 4: Fruit Weight

Fruit	Weight (kg)
Pears	2.60
Apples	2.95
Oranges	1.90

Figure 1 displays a magnificent owl from Lapland.



Figure 1: Owl

Figure 2 illustrates the placement of two images side by side.



Figure 2: Images side by side

Figure 3 presents the European Project Semester (EPS) logo.



Figure 3: EPS logo

MathJax Plugin Usage Example

Equation `\ref{eq:cosinesimilarity}` represents the cosine similarity between two vectors of features. This similarity measurement takes values in the range of $[0,1]$ [\[14\]](#). This is an in line expression $a+b=c$.

```

\begin{equation}
\cos\alpha=\frac{\hat{A}\cdot\hat{B}}{\|\hat{A}\|\|\hat{B}\|}\equiv\frac{\sum_{j=1}^n\hat{A}_j\hat{B}_j}{\sqrt{\sum_{j=1}^n\hat{A}^2_j}\sqrt{\sum_{j=1}^n\hat{B}^2_j}}
\label{eq:cosinesimilarity} \end{equation}

```

As [\[15\]](#) states, the most popular similarity metrics are the distance and the cosine similarity. The distance-based metrics include the Euclidean distance, the Hamming distance or the Chebyshev distance, among others.

Equation `\ref{eq:euclidean}` displays the Euclidean distance formula.

```

\begin{equation} d(x,y)=\sqrt{\sum_{k=1}^n(x_k-y_k)^2} \label{eq:euclidean}
\end{equation}

```

Code Listing Example

The server code is presented in Listing 1.

Listing 1: Server-side code

```

public class CheckersServer {
    private static final int PORT = 12345;
    private static char[][] board;
    private static List<ClientHandler> clients = new ArrayList<>();
    public static void main(String[] args) {

```

```
board = new char[8][8];
initializeBoard();
try (ServerSocket serverSocket = new ServerSocket(PORT)) {
    System.out.println("Checkers Server is running...");
    while (true) {
        Socket clientSocket = serverSocket.accept();
        ClientHandler clientHandler = new
ClientHandler(clientSocket);
        clients.add(clientHandler);
        new Thread(clientHandler).start();
    }
} catch (IOException e) {
    e.printStackTrace();
}
}
```

Bibliography

- [1] Rita Thapa, Hom Bahadur Rijal, Masanori Shukuya, Hikaru Imagawa, 2019. [Study on the wintry thermal improvement of makeshift shelters built after Nepal earthquake 2015](#). *Energy and Buildings*, 199, pp.62 - 71, ISSN 0378-7788.
- [2] Kazuko Obayashi, Shigeru Masuyama, 2020. [Pilot and Feasibility Study on Elderly Support Services Using Communicative Robots and Monitoring Sensors Integrated With Cloud Robotics](#). *Clinical Therapeutics*, ISSN 0149-2918.
- [3] Alexandre Soares dos Reis, Elien Gielen, Ko Wopereis, Marcel Pasternak, Vaido Sooäär, Tobias Schneider, Abel J. Duarte, Benedita Malheiro, Jorge Justo, Cristina Ribeiro, Manuel F. Silva, Paulo Ferreira, Pedro Guedes, 2020. Smart Companion Pillow – An EPS@ISEP 2019 Project. *Robot 2019: Fourth Iberian Robotics Conference*, Cham: Springer International Publishing, pp.465–476, ISBN 978-3-030-36150-1.
- [4] Abdelbaset S. Hamza, Rahman Tashakkori, Bejamen Underwood, William O'Brien, Chris Campell, 2023. [BeeLive: The IoT platform of Beemon monitoring and alerting system for beehives](#). *Smart Agricultural Technology*, 6, pp.100331, ISSN 2772-3755.
- [5] Manuel Mahn, Markus Kemper, 2006. [A BEHAVIOUR-BASED NAVIGATION SYSTEM FOR AN AUTONOMOUS INDOOR BLIMP](#). *IFAC Proceedings Volumes*, 39, pp.837-842, ISSN 1474-6670.
- [6] B. Sotomayor, Ruben S. Montero, I.M. Llorente, I. Foster, Sept 2009. Virtual Infrastructure Management in Private and Hybrid Clouds. *Internet Computing, IEEE*, 13, pp.14-22.
- [7] Ranjith, V. Velmurugan, S. Thanikaikarasan, 2020. [Prediction of Exhaust Gas Emission characteristics using Neem oil blended bio-diesel in diesel engine](#). *Materials Today: Proceedings*, 21, pp.870 - 875, ISSN 2214-7853.
- [8] Anae Sobhani, Bilal Farooq, 2018. [Impact of smartphone distraction on pedestrians crossing behaviour: An application of head-mounted immersive virtual reality](#). *Transportation Research Part F: Traffic Psychology and Behaviour*, 58, pp.228 - 241, ISSN 1369-8478.
- [9] YeongKyun Lee, Jongpil Jeong, 2018. [Design and Implementation of Monitoring System Architecture for Smart Bicycle Platform](#). *Procedia Computer Science*, 134, pp.464–469, ISSN 1877-0509.
- [10] Tareq Khan, May 2018. A Smart Wearable Gadget for Noninvasive Detection and Notification of Diaper Moisture. *2018 IEEE International Conference on Electro/Information Technology (EIT)*, pp.0240-0244, ISSN 2154-0373.
- [11] Android Open Source Project, 2014. [Android Developers: Android 4.1 APIs](#). [Accessed in April

2017].

[12] Cloud Expo, 2008. *Twenty-One Experts Define Cloud Computing*. [Accessed in April 2021].

[13] Gartner, 2021. *Gartner Magic Quadrant for Data Science and Machine Learning Platforms*.

[Accessed in April 2021].

[14], [15] Sanghamitra Bandyopadhyay, Sriparna Saha, 2013. *Unsupervised Classification: Similarity Measures, Classical and Metaheuristic Approaches, and Applications*. Berlin, Germany: Springer, ISBN 978-3-642-32450-5.

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