AILP (2017) Report

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1 Introduction

This report describes work done in the AILP course. It gives the aims and hypothesis that guided the work; describes the algorithms that were implemented; reports the results of experiments that were run; and analyses these results.

2 Aims and hypothesis

The aim of the assignment is to ...

The intention of the extension implemented is:

> to allow analysis of legal disputations in a way that closely matches what happens in real cases.

3 Algorithms and implementation

For this purpose the following extensions were carried out

1. reading of input from text files
2. ...

3.1 Reading from text files

How this was implemented.

3.2 Another extension

Another implementation.

4 Experiments and results

4.1 Choice of experiments

4.2 Experimental results

5 Discussion and Conclusion

5.1 Formatting: tables

An example of a table is shown as Table 1. Somewhat different styles are allowed according to the type and purpose of the table.

Figure 1: *This is an example of a table.*

ratio	decibels
1/1	0
2/1	≈ 6
3.16	10
10/1	20
1/10	-20
100/1	40
1000/1	60

To include text without formatting, use this (scriptsize uses a significantly smaller font, intermediate sizes are footnotesize and small):

```
8.8   1.2   0.0   2.5   3.8   7.5   0.0   5.0   0.0
7.5   1.2   0.0   2.5   2.5   0.0   5.0   0.0   1.2
0.0  67.5   5.0   1.2  11.2   3.8   7.5   3.8   0.0
0.0   1.2  62.5   3.8  22.5   0.0   6.2   2.5   1.2
2.5   0.0   0.0  76.2   0.0   1.2   6.2   0.0  13.8
1.2   6.2  21.2   5.0  47.5   1.2   5.0   1.2   6.2
6.2   3.8   0.0   5.0   0.0  57.5   0.0  10.0   0.0
0.0   2.5   1.2   8.8   0.0   0.0  73.8   2.5  11.2
0.0   2.5   8.8   2.5   3.8   5.0   2.5  61.3   2.5
0.0   0.0   2.5  20.0   0.0   0.0  12.5   0.0  63.7
```

If you want to use both columns, put it in a figure*: (figure* uses both columns, figure just 1): it is likely to float away to an unexpected place, though.

```
8.8   1.2   0.0   2.5   3.8   7.5   0.0   5.0   0.0
7.5   1.2   0.0   2.5   2.5   0.0   5.0   0.0   1.2
0.0  67.5   5.0   1.2  11.2   3.8   7.5   3.8   0.0
0.0   1.2  62.5   3.8  22.5   0.0   6.2   2.5   1.2
2.5   0.0   0.0  76.2   0.0   1.2   6.2   0.0  13.8
1.2   6.2  21.2   5.0  47.5   1.2   5.0   1.2   6.2
6.2   3.8   0.0   5.0   0.0  57.5   0.0  10.0   0.0
0.0   2.5   1.2   8.8   0.0   0.0  73.8   2.5  11.2
0.0   2.5   8.8   2.5   3.8   5.0   2.5  61.3   2.5
0.0   0.0   2.5  20.0   0.0   0.0  12.5   0.0  63.7
```

Figure 2: Some data

5.2 Maths, if needed

$$x(t) = s(f_\omega(t)) \tag{1}$$

where $f_\omega(t)$ is a special warping function

$$f_\omega(t) = \frac{1}{2\pi j} \oint_C \frac{\nu^{-1k} d\nu}{(1-\beta\nu^{-1})(\nu^{-1}-\beta)} \tag{2}$$

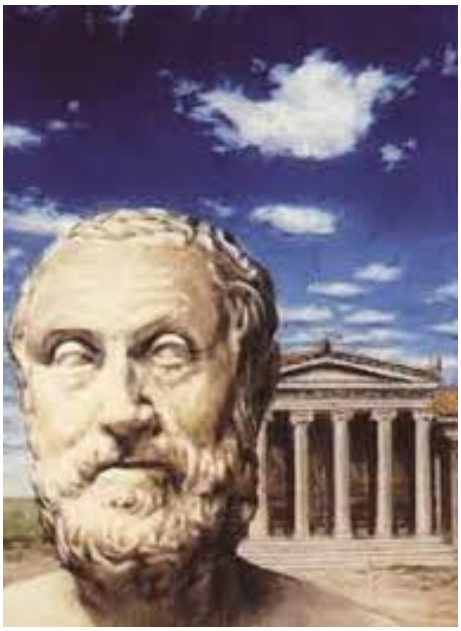
A residue theorem states that

$$\oint_C F(z)dz = 2\pi j \sum_k Res[F(z), p_k] \tag{3}$$

Applying (3) to (1), it is straightforward to see that

$$1 + 1 = \pi \tag{4}$$

And here is an included image (png and pdf formats are allowed).



5.3 References

References should be indexed in some way.

Here they are given using bibtex to format the entries, which in this case are [3], [1], and [2]. You *can* use `bibtex` to prepare references, as here, or do it by hand if there are very few.

References

[1] K.-F. Lee. *Automatic Speech Recognition: The Development of the SPHINX System*. Kluwer Academic Publishers, Boston, 1989.

[2] A. I. Rudnicky, J. H. Polifroni, and R. A Brennan. Interactive problem solving with speech. *J. Acoust. Soc. Amer.*, 84(21–33), 1988.

[3] J. O. Smith and J. S Abel. Bark and ERB bilinear transforms. *IEEE Trans. Speech and Audio Proc.*, 7(6):697–708, 1999.