Place The Title Here

Student1, Student2, Student3
Media Computer Science
Hochschule Bremen City University of Applied Sciences

April 15, 2021

Abstract

A very short summary of the contents and results. No introduction to the topic.

1 Bézier Curves

YadiYadiYadi.

Formulae can be written within the text $x = \sum_{i=0}^{9} i^2$. or even better as numbered equations:

$$x = \sum_{i=0}^{9} i^2 \tag{1}$$

Equation (1) is only "‘bogus"’, of course. Here we have a matrix:

$$\begin{bmatrix} \dot{y} \\ \dot{v} \end{bmatrix} = \begin{bmatrix} 0 & 1 \\ -13 & 6 \end{bmatrix} \begin{bmatrix} y \\ v \end{bmatrix} \tag{2}$$

Matrices can be used to define the Bézier Points. Alternatively, use the verbatim environment described in the next section.

1.1 Matlab-Code

(Use Section 1.1 only when 1.2 exists, also!)

Code can be listed as follows: The Matlab implementation plotting the eigen solution of our simple differential equation reads as follows:

Image Template:
The following line
within the code %-sign
places a bitmap as floating object:

Figure 1: A simple mechanical system containing two springs or whatsoever.

```
A = [0 1; -13 6];
[E, L] = eig(A);
lambda = L(1,1);                % 1st eigen value
r = E(:,1);                     % 1st eigen vector
t = 0:.01:2;                    % very short time interval
y = r * exp( lambda*t);         % 1st eigen function
plot( t, real(y), t, imag(y))   % real und imaginary paarts for y und v
```

A short description is always good. Note that there exist alternative environments for listings, as well.

Since figures are implemented as floating objects, each of them should be referred to at least once within your text, for example, see figure 1. Literature is not referrenced with \ref, but rather using \cite like the book by Gerald Farin [1]. Online sources should not be mixed with referred punlications. These can be contained in an extra listing or simply placed as footnotes [1].

1.2 Numerical Examples

2 Conclusions and Future Work

It should be recognized that the Euler method is very imprecise. Thus, an integration method with greater approximation order, like that by Runge-Kutta is often preferred.

References

[1] Gerald Farin, *Curves and Surfaces for CAGD. A practical guide.* 5th edition, Academic Press, San Diego 2002, ISBN 1-55860-737-4

[1] `https://de.wikipedia.org/wiki/Bezierkurve`