Degree Programme

Systems Engineering

Major Infotronics

BACHELOR'S THESIS

DIPLOMA 2021

Silvan Zahno

Guide to Thesis

Professor
Silvan Zahno

Expert
Pierre Pompili

Submission date of the report
February 5, 2021

Contents

1 | Installation

1. Install https://miktex.org/download

2. MiKTeX Packages

   - minted

     – pip install pygments

     – add Python Scripts to PATH Environment Variable

3. Install your preferred IDE

   - We use Visual Studio Code

   - With the following extensions

     – LaTeX language support

     – LaTeX Workshop

2 | Page Formatting

Contents

2.1 General Formatting

2.1.1 Page Formatting

```
\newpage        % jump to new page

\par            % new paragraph
\\              % new paragraph
\\* or \newline % new line

%               % start line comment
```

2.1.2 Font sizes

Huge
huge
LARGE
Large
large
normal (default)
small
footnotesize
scriptsize
tiny

```
{\Huge Huge}
{\huge huge}
{\LARGE LARGE}
{\Large Large}
{\large large}
{\normalsize normal (default)}
{\small small}
{\footnotesize footnotesize}
{\scriptsize scriptsize}
{\tiny tiny}
```

2.1.3 Decorations

Italic
Typewriter
Bold
Text
Serif Font
Serif (Roman)
Underline
Emphasis

```
\textit{Italic}
\texttt{Typewriter}
\textbf{Bold}
\texttt{Text}
\textsf{Serif}
\textrm{Sans Serif (Roman)}
\underline{Underline}
\emph{Emphasis}
```

2.1.4 Text Alignment

left aligned text

right aligned text

centered text

```
\raggedright
left aligned text \\
\raggedleft
right aligned text \\
\centering
centered text \\
%\justify
%justified text \\
```

2.1.5 Links

http://hevs.ch
silvan.zahno@hevs.ch
Hevs Website

```
\url{http://hevs.ch}
\href{mailto:\AuthorEmail}{\AuthorEmail}
\href{http://hevs.ch}{Hevs Website}
```

2.1.6 Cross referencing

Set labels and reference them afterwards. Labels can be set anywhere hereafter examples for sections, equations and images.

2.1.6 Cross referencing

$$\sum_{i=0}^{\infty} a_i x^i \tag{2.1}$$

The equations 2.1 is a power series.

Figure 2.1   Figure with reference label

Figure 2.1 shows the image.

```
\section{Cross referencing} \label{crossref}
\ref{crossref} \nameref{crossref}

\begin{equation} \label{eq:1}
  \sum_{i=0}^{\infty} a_i x^i
\end{equation}
The equations \ref{eq:1} is a power series.

\begin{center}
  \begingroup
  \includegraphics[width=0.5\columnwidth]{placeholder.pdf}
  \captionof{figure}{Figure with reference label}
  \label{fig:figurelabel}
  \endgroup
\end{center}
figure \ref{fig:figurelabel} shows the logo.
```

3 | General Elements

Contents

3.1 Sections

For creating Chapters, Sections and Subsections there are multiple levels available. Good practice is to limit the number of level to `\subsubsection`

```
0 = \chapter{Chapter}
1 = \section{First Section}
2 = \subsection{Second Section}
3 = \subsubsection{Third Section}
4 = \paragraph{Paragraph}
5 = \subparagraph{Subpararaph}
```

3.2 Lists

- One

- Two

```
\begin{itemize}
  \item One
  \item Two
\end{itemize}
```

- One

  - Two

  - Three

- Four

```
\begin{itemize}
  \item One
  \begin{itemize}
    \item Two
    \item Three
  \end{itemize}
  \item Four
\end{itemize}
```

1. One

2. Two

```
\begin{enumerate}
  \item One
  \item Two
\end{enumerate}
```

1. One

   (a) Two

   (b) Three

2. Four

```
\begin{enumerate}
  \item One
  \begin{enumerate}
    \item Two
    \item Three
  \end{enumerate}
  \item Four
\end{enumerate}
```

☐ Normal item
✓ cmark item
✗ xmark item
☑ done item
☒ wontfix item

```
\begin{todolist}
  \item Normal item
  \item[\cmark] cmark item
  \item[\xmark] xmark item
  \item[\done] done item
  \item[\wontfix] wontfix item
\end{todolist}
```

3.3 Multicolumns

Column 1   Column 2

```
\begin{multicols}{2}
  Column 1
  \vfill\null\columnbreak
  Column 2
\end{multicols}
```

4 | Images

(a) topleft

(b) topright

(c) bottomleft
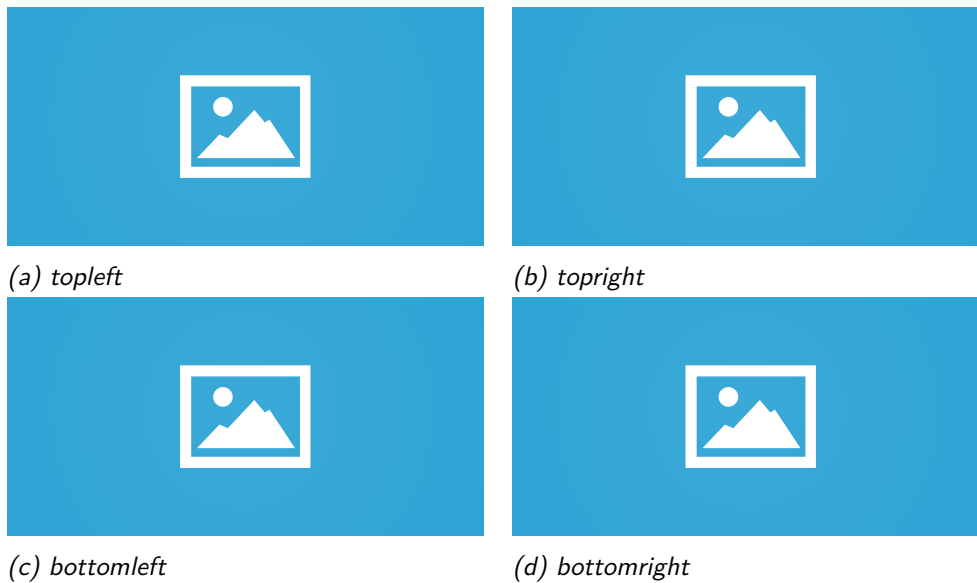

(d) bottomright

Figure 4.3   Example subcaption

Figure 4.1   Defined figure placement

```
\begin{center}
  \begingroup
  \includegraph-
  ↪    ics[width=0.5\columnwidth]placeholder.pdf}
  \captionof{figure}{Defined figure
  ↪    placement}
  \label{fig:figureplacement}
  \endgroup
\end{center}
```

```
\begin{figure}
  \includegraphic-
  ↪    swidth=0.5\columnwidth]{placeholder.pdf}
  \captionof{figure}{Automatic figure
  ↪    placement}
  \label{fig:automaticfigureplacement}
\end{figure}
```

This section contains examples of figures: 4.3, 4.3a, 4.3b, 4.3c, 4.3d

5 | Tables

Left	Center	Right	Right	Right
1.1	1.2	1.3	1.4	1.5
2.1	2.2	2.3	2.4	2.5
3.1	3.2	3.3	3.4	3.5
4.1	4.2	4.3	4.4	4.5
5.1	5.2	5.3	5.4	5.5
6.1	6.2	6.3	6.4	6.5
7.1	7.2	7.3	7.4	7.5

Table 5.1   Table Example 1

```
\begingroup
\begin{tabular}{l : c | r || r V{2.7}
↪  r \vline}
  Left & Center & Right & Right &
  ↪  Right \\
  1.1 & 1.2 & 1.3 & 1.4 & 1.5 \\
  ↪  \hdashline
  2.1 & 2.2 & 2.3 & 2.4 & 2.5 \\ \hline
  3.1 & 3.2 & 3.3 & 3.4 & 3.5 \\
  ↪  \hline \hline
  4.1 & 4.2 & 4.3 & 4.4 & 4.5 \\
  ↪  \hlineB{2.7}
  5.1 & 5.2 & 5.3 & 5.4 & 5.5 \\
  ↪  \toprule
  6.1 & 6.2 & 6.3 & 6.4 & 6.5 \\
  ↪  \midrule
  7.1 & 7.2 & 7.3 & 7.4 & 7.5 \\
  ↪  \bottomrule
\end{tabular}
\captionof{table}{Table Example 1}
\label{tab:ex1}
\endgroup
```

X	Q_1	Q_0	Y
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	0

Table 5.2   Table Example 2

```
\begingroup
\begin{tabular}{c V{2.7} c  c V{2.7}
↪  c}
  X & $Q_1$ & $Q_0$ & Y \\ \hline
  ↪  \hline
  0 & 0 & 0 &  0 \\ \hline
  0 & 0 & 1 &  1 \\ \hline
  0 & 1 & 0 &  1 \\ \hline
  0 & 1 & 1 &  0 \\ \hlineB{2.7}
  1 & 0 & 0 &  1 \\ \hline
  1 & 0 & 1 &  1 \\ \hline
  1 & 1 & 0 &  1 \\ \hline
  1 & 1 & 1 &  0 \\ \hline
\end{tabular}
\captionof{table}{Table Example 2}
\label{tab:ex2}
\endgroup
```

Operator	*Beschreibung*
$+$	Addition
-	Substraktion

Table 5.3   Table Example 3

```
\begingroup
  \begin{tabular}{ | c | c | }
    \hline
    \multicolumn{1}{|c|}{\emph{
    ↪  Operator }} &
    ↪  \multicolumn{1}{|c|}{\emph{
    ↪  Beschreibung}} \\ \hline
    + & \multicolumn{1}{|l|}{Addition}
    ↪  \\ \hline
    - & \multicol-
    ↪  umn{1}{|l|}{Substraktion} \\
    ↪  \hline
  \end{tabular}
  \captionof{table}{Table Example 3}
  \label{tab:ex3}
\endgroup
```

Room \ Date	Col 1	Col 2
Row 1		
Row 2		
Row 3		

Table 5.4   Table Example 4

```latex
\begingroup
\begin{tabular}{|l||*{2}{c|}}\hline
  \backslash-
  ↪ box{Room}{Date}&\makebox[3em]{Col
  ↪ 1}&\makebox[3em]{Col 2} \\
  ↪ \hline\hline
  Row 1 &&\\\hline
  Row 2 &&\\\hline
  Row 3 &&\\\hline
\end{tabular}
\captionof{table}{Table Example 4}
\label{tab:ex4}
\endgroup
```

6 | Colors

Latex Symbol	Latex Code
black	`\textcolor{black}{black}`
	`\textcolor{white}{white}`
red	`\textcolor{red}{red}`
yellow	`\textcolor{yellow}{yellow}`
lime	`\textcolor{lime}{lime}`
olive	`\textcolor{olive}{olive}`
green	`\textcolor{green}{green}`
teal	`\textcolor{teal}{teal}`
blue	`\textcolor{blue}{blue}`
HEICyan	`\textcolor{HEICyan}{HEICyan}`
HEIMagenta	`\textcolor{HEIMagenta}{HEIMagenta}`
HEIYellow	`\textcolor{HEIYellow}{HEIYellow}`
HEIGreen	`\textcolor{HEIGreen}{HEIGreen}`
SPLGreen	`\textcolor{SPLGreen}{SPLGreen}`
SPLBlue	`\textcolor{SPLBlue}{SPLBlue}`
SPLPurple	`\textcolor{SPLPurple}{SPLPurple}`
mGray20	`\textcolor{mGray20}{mGray20}`
mGray40	`\textcolor{mGray40}{mGray40}`
mGray60	`\textcolor{mGray60}{mGray60}`
mGray80	`\textcolor{mGray80}{mGray80}`
	`\textcolor{mWhite}{mWhite}`
mBlack	`\textcolor{mBlack}{mBlack}`
mPink	`\textcolor{mPink}{mPink}`
Accent Color 1	`\textcolor{coloraccent1}{Accent Color 1}`
Accent Color 2	`\textcolor{coloraccent2}{Accent Color 2}`
Accent Color 3	`\textcolor{coloraccent3}{Accent Color 3}`

Test text

colorbox

```
%\pagecolor{black}  % would make this
↪    and all comming pages black
{
\color{mGray80}
Test text \\
}
{
\color{coloraccent1}
\rule{\linewidth}{1mm}
}
\colorbox{coloraccent2}{colorbox}
```

7 | Code

Contents

7.1 Inline Code

Inline minted `int` x = 0
Inline code int $x = 0$

```
Inline minted \mintinline{cpp}{int x =
↪  0}
Inline code \lstinline{int x = 0}
```

7.2 Bloc Code

```
1  import numpy as np
2  class PiClass:
3  """ Pi class for getting pi value """
4    def __init__():
5    """ Returns value of Pi """
6      return np.pi
```

```
\begin{minted}
[
fontsize=\scriptsize,
linenos
]{python}
import numpy as np
  class PiClass:
  """ Pi class for getting pi value
  ↪  """
    def __init__():
    """ Returns value of Pi """"
      return np.pi
\end{minte d}
```

```
import numpy as np
class PiClass:
""" Pi class for getting pi value """
  def __init__():
  """ Returns value of Pi """
    return np.pi
```

```
\usemintedstyle{monokai}
\begin{minted}[bgcolor=black!80]{python}
import numpy as np
class PiClass:
""" Pi class for getting pi value """
  def __init__():
  """ Returns value of Pi """
    return np.pi
\end{minte d}
```

```
import numpy as np
class PiClass:
""" Pi class for getting pi value """
  def __init__():
  """ Returns value of Pi """
    return np.pi
```

```
\usemintedstyle{bw}
\begin{minted}
[frame=lines,
framesep=2mm,
baselinestretch=1.2,
bgcolor=gray!20,]{python}
import numpy as np
class PiClass:
""" Pi class for getting pi value """
  def __init__():
  """ Returns value of Pi """
    return np.pi
\end{minte d}
```

7.3 Listings

```
/**
 * The HelloWorldApp class implements
↪   an application that
 * simply prints "Hello World!" to
↪   standard output.
 */
class HelloWorldApp {
    public static void main(String[]
    ↪   args) {
        System.out.println("Hello
        ↪   World!"); // Display the
        ↪   string.
    }
}
```

```
\begin{center}
  \inputminted{java}{02-
  ↪   main/listings/HelloWorld.java}
  \captionof{listing}{listing example}
  \label{lst:listing_example}
\end{center}
```

Listing 7.1   listing example

8 | MathJax

Contents

- Mathjax Latest Documentation

- Stack Exchange Basic Tutorial and Quick Reference

- List of LaTeX Mathematical Symbols

- List of LaTeX Symbols

8.1 Equations

8.1.1 Environments

The package `amsmath` features 2 different environments `align`, `split`, `multiline`

align

Numbered equations aligned at points marked with `\&` usually just before a relation.

$$a_1 = b_1 + c_1 \tag{8.1}$$
$$a_2 = b_2 + c_2 - d_2 + e_2 \tag{8.2}$$

```
\begin{align}
  a_1& =b_1+c_1\\
  a_2& =b_2+c_2-d_2+e_2
\end{align}
```

split

Similar alignment to `align`, but the whole construct fits within equation and is numbered as a unit.

$$
\begin{split}
a &= b+c-d \\
  &\quad +e-f \\
  &= g+h \\
  &= i
\end{split}
\tag{8.3}
$$

```
\begin{equation}
  \begin{split}
    a& =b+c-d\\
     & \quad +e-f\\
     & =g+h\\
     & =i
  \end{split}
\end{equation}
```

multline

For long expressions taking more than one line, with no specified alignment points.

$$
\begin{multline}
a+b+c+d+e+f+g \\
l+m+n+o+p+q+r
\end{multline}
\tag{8.4}
$$

```
\begin{multline}
  a+b+c+d+e+f+g\\
  l+m+n+o+p+q+r
\end{multline}
```

8.2 Symbols

Mathjax code need to be places between $ Symbols

- $...$: for inline Mathjax

- $$...$$: for bloc Mathjax

8.3 Text & Additions

Symbol	Code	Symbol	Code
normal text	`\text{normal text}`	**bold text**	`\textbf{bold text}`
italic text	`\textit{italic text}`	`fixspace text`	`\texttt{fixspace text}`
$Q_1\ I_{min}$	`Q_1 I_{min}`	$x^2\ x^{20}$	`x^2 x^{20}`
$\acute{x}$	`\acute{x}`	$\grave{x}$	`\grave{x}`
$\dot{x}$	`\dot{x}`	$\ddot{x}$	`\ddot{x}`
$\bar{x}$	`\bar{x}`	$\tilde{x}$	`\tilde{x}`
$\hat{x}$	`\hat{x}`	$\check{x}$	`\check{x}`
$\vec{x}$	`\vec{x}`	$\breve{x}$	`\breve{x}`
$\overset{over}{X}$	`\overset{over}{X}`	$\underset{under}{X}$	`\underset{under}{X}`
$\overline{xxx}$	`\overline{xxx}`	$\underline{xxx}$	`\underline{xxx}`
$\overbrace{xxx}$	`\overbrace{xxx}`	$\underbrace{xxx}$	`\underbrace{xxx}`
$\overleftarrow{xxx}$	`\overleftarrow{xxx}`	$\overrightarrow{xxx}$	`\overrightarrow{xxx}`
$\xleftarrow[under]{over}$	`\xleftarrow[under]{over}`	$\xrightarrow[under]{over}$	`\xrightarrow[under]{over}`

8.4 Spaces

Symbol	Code	Symbol	Code	Symbol	Code
$a\,b$	a `\mspace{3mu}` b	$a\,b$	a `\,` b	$a\,b$	a `\thinspace` b
$a\,b$	a `\mspace{4mu}` b	$a\,b$	a `\:` b	$a\,b$	a `\medspace` b
$a\,b$	a `\mspace{5mu}` b	$a\,b$	a `\;` b	$a\,b$	a `\thickspace` b
$a\,b$	a `\mspace{6mu}` b	$a\ b$	a `\ ` b	-	-
$a\quad b$	a `\mspace{18mu}` b	$a\quad b$	a `\quad` b	-	-
$a\qquad b$	a `\mspace{36mu}` b	$a\qquad b$	a `\qquad` b	-	-
ab	a `\mspace{-3mu}` b	ab	a `\,` b	ab	a `\negthinspace` b
ab	a `\mspace{-4mu}` b	-	-	ab	a `\negmedspace` b
ab	a `\mspace{-5mu}` b	-	-	ab	a `\negthickspace` b

8.5 Quotes

Symbol	Code	Alt Code
'	`\q`	`\textnormal{\textquotesingle}`
'	`\ql`	`\textnormal{\textquoteleft}`
'	`\qr`	`\textnormal{\textquoteright}`
"	`\qq`	`\textnormal{\textquotedblright}`
"	`\qql`	`\textnormal{\textquotedblleft}`
"	`\qqr`	`\textnormal{\textquotedblright}`

8.6 Greek Letters

Symbol	Code
$A\alpha$	A \alpha
$B\beta$	B \beta
$\Gamma\gamma$	\Gamma \gamma
$\Delta\delta$	\Delta \delta
$E\epsilon\varepsilon$	E \epsilon \varepsilon
$Z\zeta$	Z \zeta
$H\eta$	H \eta
$\Theta\theta\vartheta$	\Theta \theta \vartheta
$I\iota$	I\iota
$K\kappa$	K \kappa
$\Lambda\lambda$	\Lambda \lambda
$M\mu$	M \mu
$N\nu$	N \nu
$\Xi\xi$	\Xi \xi
$O\ominus$	O \ominus
$\Pi\pi\varpi$	\Pi \pi \varpi
$P\rho$	P \rho
$\Sigma\sigma\varsigma$	\Sigma \sigma \varsigma
$T\tau$	T \tau
$\Upsilon\upsilon$	\Upsilon \upsilon
$\Phi\phi\varphi$	\Phi \phi \varphi
$X\chi$	X \chi
$\Psi\psi$	\Psi \psi
$\Omega\omega$	\Omega \omega

8.7 Symbols

8.7.1 Relational Operators

Symbol	Code	Symbol	Code
$<$	<	$>$	>
$\nless$	\nless	$\ngtr$	\ngtr
$\leq$	\leq	$\geq$	\geq
$\leqslant$	\leqslant	$\geqslant$	\geqslant
$\nleq$	\nleq	$\ngeq$	\ngeq
$\nleqslant$	\nleqslant	$\ngeqslant$	\ngeqslant
$\ll$	\ll	$\gg$	\gg
$\lll$	\lll	$\ggg$	\ggg
$\subset$	\subset	$\supset$	\supset
$\not\subset$	\not\subset	$\not\supset$	\not\supset
$\subseteq$	\subseteq	$\supseteq$	\supseteq
$\nsubseteq$	\nsubseteq	$\nsupseteq$	\nsupseteq

Symbol	Code
$=$	`=`
$\equiv$	`\equiv`
$\approx$	`\approx`
$\cong$	`\cong`
$\simeq$	`\simeq`
$\sim$	`\sim`
$\propto$	`\propto`
$\neq \ne$	`\neq \ne`

8.7.2 Arrows

Symbol	Code	Symbol	Code
$\rightarrow \to$	`\rightarrow \to`	$\leftarrow \gets$	`\leftarrow \gets`
$\Rightarrow$	`\Rightarrow`	$\Leftarrow$	`\Leftarrow`
$\longrightarrow$	`\longrightarrow`	$\longrightarrow$	`\longrightarrow`
$\Longrightarrow$	`\Longrightarrow`	$\Longrightarrow$	`\Longrightarrow`
$\mapsto$	`\mapsto`	-	-
$\longmapsto$	`\longmapsto`	-	-
$\uparrow$	`\uparrow`	$\Uparrow$	`\Uparrow`
$\downarrow$	`\downarrow`	$\Downarrow$	`\Downarrow`
$\updownarrow$	`\updownarrow`	$\Updownarrow$	`\Updownarrow`

8.7.3 Boolsche Algebra Symbols

Operator	Symbol	Code
NEGATE	$\neg \;\overline{x}\; \bar{x}$	`\neg \overline{x} \bar{x}`
AND	$\bigwedge \;\wedge\; *\; \&$	`\bigwedge \wedge * \And`
OR	$\bigvee \;\vee\; +\; \mid$	`\bigvee \vee + \mid`
XOR	$\oplus$	`\oplus`

8.7.4 Other Symbols

Symbol	Code	Symbol	Code	Symbol	Code
$\#$	`\#`	$\sharp$	`\sharp`	$\S$	`\S`
$\lozenge$	`\lozenge`	$\blacklozenge$	`\blacklozenge`	∞	`\infty`
$\square$	`\square`	$\blacksquare$	`\blacksquare`	$\spadesuit$	`\spadesuit`
$\triangle$	`\triangle`	$\blacktriangle$	`\blacktriangle`	$\clubsuit$	`\clubsuit`
$\triangledown$	`\triangledown`	$\blacktriangledown$	`\blacktriangledown`	$\heartsuit$	`\heartsuit`
$\diagup$	`\diagup`	$\diagdown$	`\diagdown`	$\diamondsuit$	`\diamondsuit`
$\varnothing$	`\varnothing`	$\emptyset$	`\emptyset`	$\angle$	`\angle`
$\square$	`\square`	$\surd$	`\surd`	$\measuredangle$	`\measuredangle`

8.8 Math Symbols

8.8.1 Trigonometry

Symbol	Code	Symbol	Code	Symbol	Code
$\sin$	`\sin`	$\arcsin$	`\arcsin`	$\sinh$	`\sinh`
$\cos$	`\cos`	$\arccos$	`\arccos`	$\cosh$	`\cosh`
$\tan$	`\tan`	$\arctan$	`\arctan`	$\tanh$	`\tanh`

8.8.2   Prefix Operators

Symbol	Code	Symbol	Code	Symbol	Code
$\int$	`\int`	$\oint$	`\oint`	$\sum$	`\sum`
$\prod$	`\prod`	$\coprod$	`\coprod`	-	-
$\bigodot$	`\bigodot`	$\bigoplus$	`\bigoplus`	$\bigotimes$	`\bigotimes`
$\bigcap$	`\bigcap`	$\bigcup$	`\bigcup`	$\bigsqcup$	`\bigsqcup`
$\bigvee$	`\bigvee`	$\bigwedge$	`\bigwedge`	-	-

9 | Fancy Additions

Contents

9.1 Comments

Comments can be activated and deactivated with the options packet in the file 01-settings/metadata.tex

- **\todo**[author=tschinz]{Todo Comment with Authorname}

- **\todo**{Todo Comment}

- **\unsure**{Unsure Comment}

- **\info**{Info Comment}

- **\critical**{Critical Comment}

- **\change**{Change Comment}

- **\question**{Question Comment}

- **\improvement**{Improvement Comment}

9.2 Boxes

The package awesomebox allows for some nice looking boxes.

Lorem Ipsum ...

```
\notebox{Lorem Ipsum ...}
```

Lorem Ipsum ...

```
\tipbox{Lorem Ipsum ...}
```

Lorem Ipsum ...

```
\warningbox{Lorem Ipsum ...}
```

Lorem Ipsum ...

```
\cautionbox{Lorem Ipsum ...}
```

Lorem Ipsum ...

```
\importantbox{Lorem Ipsum ...}
```

Lorem Ipsum ...

```
\awesomebox[violet]{2pt}{\faRocket}{violet}{Lorem
↪  Ipsum ...}
```
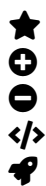
9.3 Package Pifont Special Characters

Insert with `\ding`{0}

Index	0	1	2	3	4	5	6	7
0								
8								
16								
24								
32		✁	✂	✃	✄	☎	✆	✇
40	✈	✉	☛	☞	✌	✍	✎	✏
48	✐	✑	✒	✓	✔	✕	✖	✗
56	✘	✙	✚	✛	✜	✝	✞	✟
64	✠	✡	✢	✣	✤	✥	✦	✧
72	★	✩	✪	✫	✬	✭	✮	✯
80	✰	✱	✲	✳	✴	✵	✶	✷
88	✸	✹	✺	✻	✼	✽	✾	✿
96	❀	❁	❂	❃	❄	❅	❆	❇
104	❈	❉	❊	❋	●	○	■	❏
112	❐	❑	❒	▲	▼	◆	❖	◗
120	❘	❙	❚	❛	❜	❝	❞	
128								
136								
144								
152								
160		❡	❢	❣	❤	❥	❦	❧
168	♣	♦	♥	♠	①	②	③	④
176	⑤	⑥	⑦	⑧	⑨	⑩	❶	❷
184	❸	❹	❺	❻	❼	❽	❾	❿
192	➀	➁	➂	➃	➄	➅	➆	➇
200	➈	➉	➊	➋	➌	➍	➎	➏
208	➐	➑	➒	➓	➔	→	↔	↕
216	➘	➙	➚	➛	➜	➝	➞	➟
224	➠	➡	➢	➣	➤	➥	➦	➧
232	➨	➩	➪	➫	➬	➭	➮	➯
230		➱	➲	➳	➴	➵	➶	➷
248	➸	➹	➺	➻	➼	➽	➾	

9.4 Awesome Font

Symbols from Awesomefont can be added by `\fa`<IconName>

★
⊕
⊖
</>
🚀

```
\faStar
\faPlusCircle
\faMinusCircle
\faCode
\faRocket
```

10 | References

Contents

10.1 Acronyms

Latex Output	Latex Code	Description
Augmented Reality	`\acrlong{ar}`	Displays the phrase which the acronyms stands for. Put the label of the acronym inside the braces.
AR	`\acrshort{ar}`	Prints the acronym whose label is passed as parameter.
Augmented Reality (AR)	`\acrfull{ar}`	Prints both, the acronym and its definition.

10.2 Glossary

Latex Output	Latex Code	Description
Scrum	`\gls{scrum}`	To print the term, lowercase. For example, Scrum prints mathematics when used.
Scrum	`\Gls{scrum}`	The same as ut the first letter will be printed in uppercase. Example: Scrum prints Mathematics
Scrums	`\glspl{scrum}`	The same as ut the term is put in its plural form. For instance, Scrums will write formulas in your final document.
Scrums	`\Glspl{scrum}`	The same as ut the term is put in its plural form. For example, Scrums renders as Formulas.

10.3 Bibliography

Output	Code	Description
[1]	`\cite{stateoftheArt}`	Default Citations
[before 1, after]	`\cite[before][after]{stateoftheArt}`	Citation with additions before and after

Bibliography

[1] Peter Fettke. "State-of-the-Art Des State-of-the-Art". In: *Wirtschaftsinformatik* (2006), pp. 257–266. DOI: 10.1007/s11576-006-0057-3.

Acronyms

AR Augmented Reality. 34

Glossary

Scrum Scrum is an agile process framework for managing complex knowledge work, with an initial emphasis on software development, although it has been used in other fields and is slowly starting to be explored for other complex work, research and advanced technologies..