



Fakultät Informatik

Visualization Algorithms in HoudiniFx

Bachelorarbeit im Studiengang Medieninformatik

vorgelegt von

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Kurzdarstellung

Kurze Zusammenfassung der Arbeit, höchstens halbe Seite. Deutsche Fassung auch nötig, wenn die Arbeit auf Englisch angefertigt wird.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Abstract

Only if thesis is written in English.

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Chapter 1.

Introduction

You may have read about similar things in [1]. You can also write footnotes.¹

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1.1. This is an Important Section

It is possible to reference glossary entries as library as an example. For testing multiple entries we try: shell, shell, shell

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¹Footnotes will be positioned automatically.

all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

1.1.1. And an even more important subsection

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shell

Chapter 2.

Data

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Chapter 3.

Method

In this chapter, we're actually using some code!

```
1 x = 1
2 if x == 1:
3     # indented four spaces
4     print("x is 1.")
```

Listing 3.1: This is an example of inline listing

You can also include listings from a file directly:

```
1 x = 1
2 if x == 1:
3     # indented four spaces
4     print("x is 1.")
```

Listing 3.2: This is an example of included listing

Second example of listing code file:

```
1
2 # code to be listed in thesis
3 import sys
4
5
6 def main(args):
7     print("This code is visible in the thesis" + args)
8
9 if __name__ == "__main__":
10     main(sys.argv)
```

Listing 3.3: This is a second example of included listing

Chapter 4.

Experiments

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Chapter 5.

Outlook

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Chapter 6.

Summary

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Appendix A.

Supplemental Information

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Appendix B.

Test of Latex functions

B.1. Math Functions

How to include math functions:

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

$$m = \frac{m_0}{\sqrt{1 - \frac{v^2}{c^2}}} \tag{B.2}$$

B.2. Listing elements and Tables

Enumerate

1. First
2. Second
3. Third

Listing

First

Second

Third

Unordered Listing

- Info
- Point
- Listing

B.2.1. Besondere Aufzählungen

- (i) Erster Punkt
- (ii) Zweiter Punkt
- (iii) Dritter Punkt

- (I) Erster Punkt
- (II) Zweiter Punkt
- (III) Dritter Punkt

- (a) Erster Punkt
- (b) Zweiter Punkt
- (c) Dritter Punkt

B.2.2. Verschachtelte Aufzählungen**Nummerierte Aufzählung**

- 1. Weitere Aufzählung
 - a) erstens.
 - b) zweitens.
- 2. Toter Punkt

Nichtnummerierte Aufzählung

- Unteraufzählung
 - erstens.
 - zweitens.
- der andere Punkt.

B.3. Tabellen

1	2	3
4	5	6
7	8	9

Table B.1.: Tabelle 1

1	2	3
4	5	6
7	8	9

1	2	3
4	5	6
7	8	9

1	2	3
4	5	6
7	8	9

7C0	hexadecimal
3700	octal
11111000000	binary
1984	decimal

B.3.1. Breite für Spalten festlegen

Ohne festgelegte Breite:

Day	Min Temp	Max Temp	Summary
Monday	11C	22C	A clear day with lots of sunshine. However, the strong breeze will bring down the temperatures.
Tuesday	9C	19C	Cloudy with rain, across many northern regions. Clear spells across most of Scotland and Northern Ireland, but rain reaching the far northwest.
Wednesday	10C	21C	Rain will still linger for the morning. Conditions will improve by early afternoon and continue throughout the evening.

Mit festgelegter Breite:

Day	Min Temp	Max Temp	Summary
Monday	11C	22C	A clear day with lots of sunshine. However, the strong breeze will bring down the temperatures.
Tuesday	9C	19C	Cloudy with rain, across many northern regions. Clear spells across most of Scotland and Northern Ireland, but rain reaching the far northwest.
Wednesday	10C	21C	Rain will still linger for the morning. Conditions will improve by early afternoon and continue throughout the evening.

B.3.2. Legende in der Tabelle

7C0	hexadecimal
3700	octal
11111000000	binary
1984	decimal

Table B.2.: Eine super interessante Tabelle

B.4. Adding pictures/figures

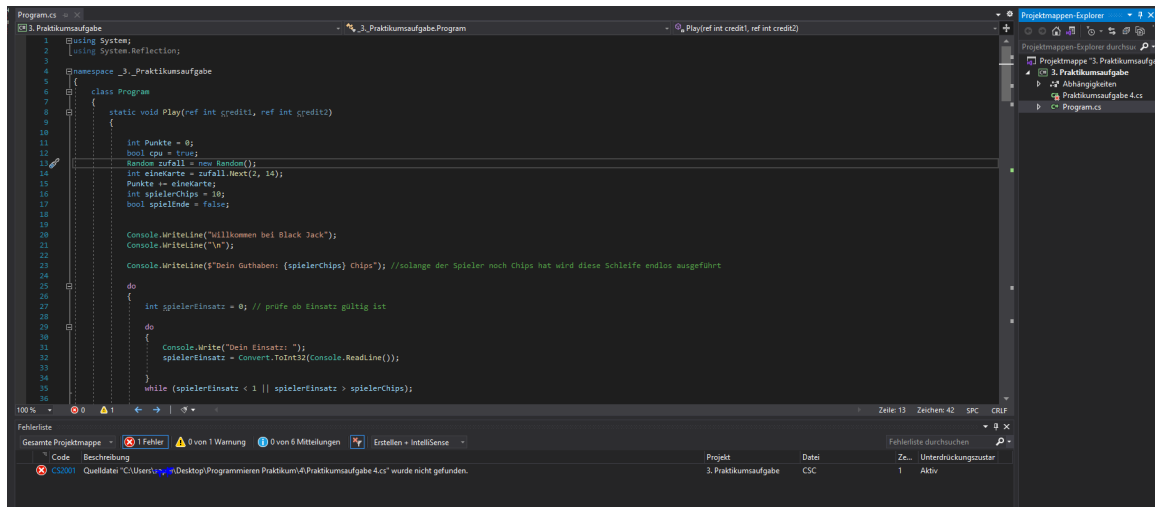


Figure B.1.: Example picture test

B.5. References

B.5.1. Referencing images/figures

Here is how you can reference you images: reference [B.1](#)

B.5.2. Referencing sources

Augmented Reality (AR) is a technology that enhances the real world with digital elements. By integrating computer graphics, audio, and other sensory inputs into the physical environment, AR applications can provide the user with an enhanced and more immersive experience. AR has gained significance in various fields in recent years, from entertainment to education and medicine. AR offers numerous applications, particularly in the industry, where it can be used in manufacturing, maintenance, and training. In medicine, AR can be used to visualize body parts and plan complex surgeries while detecting errors before they occur. In education, AR technologies can help students better understand complex concepts by presenting the learned content with visual support. Additionally, in retail, AR is increasingly being utilized to enhance the shopping experience and inform customers in innovative ways. [2, S. 1-6]

B.6. Include PDFs

5. Innovative Anwendungsszenarien für AR

5.1 Szenario 1

5.1.1 Use-Case zu Szenario 1

5.2 Szenario 2

5.2.1 Use-Case zu Szenario 2

5.3 Szenario 3

5.3.1 Use-Case zu Szenario 3

5.4 Innovatives Szenario X als Applikation

6. Analyse und Lösungsansätze der auftretenden Probleme bei der Entwicklung

6.1 Fall 1: Collision-Detection – Mesh

6.2 Fall 2: User Interaction

7. Weitere geplante Features

7.1 Multiplayer-Funktionalität in unterschiedlichen Standorten

7.2 Dynamische Interaktion von Nutzern und Objekten

8. Schlussfolgerung

7. Vorläufiger Zeitplan

Dieses Exposé dient der Veranschaulichung des Themas: Augmented Reality und dessen Anwendungsmöglichkeiten. Es soll verdeutlicht werden, wie die Bachelorarbeit eingeteilt wird. Zudem wird das Ziel der Bachelorarbeit in diesem Exposé festgelegt, welches eine Entwicklung einer Applikation ist, die ein neues Anwendungsszenario von AR beschreibt. Letztlich dient dieses Exposé vor allem zur Anregung von Ideen, welche später in der Bachelorarbeit umgesetzt werden können. Der vorläufige Zeitplan wird im kommenden Textabsatz beschrieben:

Um einen umfassenden Überblick zu erhalten, wird zunächst eine vierwöchige Recherche über mögliche und bereits existierende Anwendungsszenarien durchgeführt. Im Anschluss daran soll innerhalb von zwei Wochen ein neues Anwendungsszenario verfasst werden. Aus diesem Anwendungsszenario wird ein Prototyp innerhalb von acht Wochen entwickelt. Zum Abschluss des Projekts wird der Prototyp innerhalb eines Zeitraums von zwei Wochen getestet, indem er mehreren Probanden vorgestellt wird. Nach dem Test wird die finale Version der Applikation veröffentlicht.

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Glossary

glossary A glossary, also known as a vocabulary or clavis, is an alphabetical list of terms in a particular domain of knowledge with the definitions for those terms.. i, 1

library A suite of reusable code inside of a programming language for software development. i, 1

shell Terminal of a Linux/Unix system for entering commands. i, 1, 2