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# Proposal

Visual Computing and Games Technology (MSc)

## Tell me mAI story

by

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# 1 Introduction

In this chapter, goals of the research project are described and contributors are introduced.

## 1.1 Goals

- establish an understanding as to why someone would want this project to be conducted
- at the core the goals are the research question
- together with an indication of the scientific insights desired to be gained

## 1.2 Contributions

- indicate how the project results could contribute to progress (German: Fortschritt) of society
- indicate how the project results could contribute to science (German: Forschung)

# 2 Related Work

In the first sub section of this chapter, an overview of the literature in our field and context is provided. In the second sub section of this chapter, our previous studies are described.

## 2.1 Literature

Our related work section regarding 3rd party related work

Research areas like:

- AI storytelling in general
- AI storytelling in regards with children as target group
- Object detection of hand drawings
- Convolutional Neural Networks as a deep learning method
- UI for guiding a photo for object detection (e.g. voice UI or tangible UI)

Short introduction to related projects like:

- paint2life by Vertigo Systems
- Quick, Draw! by Google
- Using AI to bring children's drawings to life by Meta

## 2.2 Previous Studies

- our own related work
- Exploration of voice interfaces in lecture Advanced UI

## 3 Planned Technology

In this chapter, our technical concepts are described in detail along with potential research questions. Moreover, technical risks are considered, whereby we also state our solutions to mitigate the risks.

### 3.1 System Design

- how is the system organized
- diagram(s) with description

### 3.2 Technical Development

- what do we want to develop
- regarding 1st party software
- some indication regarding non-functional requirements, e.g. code should run with and without GPU
- aspects of software craftsmanship or clean code or code quality

### 3.3 Technical Risks

- name and describe each considered technical risk
- also for each technical risk show how we want to mitigate it

### 3.4 Potential Research Questions

- formulation of research questions
- coined regarding technology
- coined regarding use cases in a scientific sense
- targeting the gaining of scientific insights

## 4 Artistic Concept

In this chapter, the artistic concept is described.

### 4.1 Emotional Design

- emotions intended to be invoked in children
- considerations regarding coziness
- considerations regarding patience
- considerations regarding possible frustration which is to be minimized

## 4.2 Media Design

- design of activity cards
- choice of markers
- design of animal cards (only if we decide to create them)

# 5 Materials and Methods

In this chapter, required hardware and applied methods are discussed.

## 5.1 Materials

- required material in a scientific sense
- dataset
- 3rd party software including selected plan or edition
- 3rd party software libraries
- licenses
- required hardware
- platforms
- user accounts including selected plan or edition

## 5.2 Methods

- methods
- e.g. questionnaire
- e.g. metrics
- e.g. certain benchmarks

# 6 Project Planning

In this chapter, our initial project plan is provided, which applies at the beginning of the project and which is binding.

## 6.1 Work Packages

- our description of our work packages
- is of the latest update including the work packages regarding project management

## 6.2 Milestones

- three project phases aka. semesters
- m milestones per phase (1-to-1 relation between milestones and phases)
- ideally, each work package leads to one or more milestones
- ideally, each work package ends when all its milestones have been reached
- GANT diagram
- our work packages must be individually testable once done
- a work package may have measureable output (whichever applicable metrics), but this is optional
- Out-of-Scope: we do not need to add the resource planning
- Out-of-Scope: i.e. the estimation of work hours per work package is not in the proposal

## 6.3 Responsibilities

- team members with their qualifications
- roles with a description of the associated responsibilities
- define which team members assume which roles

## References

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