

IDE Master Graduation

Project team, Procedural checks and personal Project brief

This document contains the agreements made between student and supervisory team about the student's IDE Master Graduation Project. This document can also include the involvement of an external organisation, however, it does not cover any legal employment relationship that the student and the client (might) agree upon. Next to that, this document facilitates the required procedural checks. In this document:

- The student defines the team, what he/she is going to do/deliver and how that will come about.
- SSC E&SA (Shared Service Center, Education & Student Affairs) reports on the student's registration and study progress.
- IDE's Board of Examiners confirms if the student is allowed to start the Graduation Project.

! USE ADOBE ACROBAT READER TO OPEN, EDIT AND SAVE THIS DOCUMENT

Download again and reopen in case you tried other software, such as Preview (Mac) or a webbrowser.

STUDENT DATA & MASTER PROGRAMME

Save this form according the format "IDE Master Graduation Project Brief_familyname_firstname_studentnumber_dd-mm-yyyy". Complete all blue parts of the form and include the approved Project Brief in your Graduation Report as Appendix 1 !



family name Gratama van Andel

initials S.F. given name Seerp

student number 4333039

street & no. _____

zipcode & city _____

country Netherlands

phone _____

email _____

Your master programme (only select the options that apply to you):

IDE master(s): IPD Dfl SPD

2nd non-IDE master: _____

individual programme: _____ (give date of approval)

honours programme: Honours Programme Master

specialisation / annotation: Medisign

Tech. in Sustainable Design

Entrepreneurship

SUPERVISORY TEAM **

Fill in the required data for the supervisory team members. Please check the instructions on the right !

** chair Jeroen Coelen dept. / section: Industrial design

** mentor Jo van Engelen dept. / section: Industrial design

2nd mentor Daan van der Wiele

organisation: Alpha.one

city: Rotterdam country: Netherlands

comments
(optional)

⋮

Chair should request the IDE Board of Examiners for approval of a non-IDE mentor, including a motivation letter and c.v..



Second mentor only applies in case the assignment is hosted by an external organisation.



Ensure a heterogeneous team. In case you wish to include two team members from the same section, please explain why.

APPROVAL PROJECT BRIEF

To be filled in by the chair of the supervisory team.

chair Jeroen Coelen date 22 - 08 - 2020 signature

CHECK STUDY PROGRESS

To be filled in by the SSC E&SA (Shared Service Center, Education & Student Affairs), after approval of the project brief by the Chair. The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total: 30 EC

Of which, taking the conditional requirements into account, can be part of the exam programme 30 EC

List of electives obtained before the third semester without approval of the BoE

YES all 1st year master courses passed

NO missing 1st year master courses are:

name J. J. de Bruin, SPA-IO date 31-08-2020 signature JdB

FORMAL APPROVAL GRADUATION PROJECT

To be filled in by the Board of Examiners of IDE TU Delft. Please check the supervisory team and study the parts of the brief marked **. Next, please assess, (dis)approve and sign this Project Brief, by using the criteria below.

- Does the project fit within the (MSc)-programme of the student (taking into account, if described, the activities done next to the obligatory MSc specific courses)?
- Is the level of the project challenging enough for a MSc IDE graduating student?
- Is the project expected to be doable within 100 working days/20 weeks ?
- Does the composition of the supervisory team comply with the regulations and fit the assignment ?

Content: APPROVED NOT APPROVED

Procedure: APPROVED NOT APPROVED

- chair approved for this project
 - make title more descriptive
 - projectbrief has been submitted very late
 comments

name Monique von Morgen date 15 - 09 - 2020 signature MvM

The future roadmap for an artificial intelligent eye tracking platform _____ project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date 01 - 07 - 2020 _____ 16 - 01 - 2021 _____ end date

INTRODUCTION **

Please describe, the context of your project, and address the main stakeholders (interests) within this context in a concise yet complete manner. Who are involved, what do they value and how do they currently operate within the given context? What are the main opportunities and limitations you are currently aware of (cultural- and social norms, resources (time, money,...), technology, ...).

The company for which this graduation project will be performed is Alpha.One, the company is currently in startup/schale-up phase. Alpha.One is a neuromarketing company, they use brain scanning in order to improve marketing. They currently test marketing campaigns on real people using brain scans. The company has come with a new product; an AI-eye tracking prediction tool that simulates eye tracking of people without having to test an advertisement with actual consumers. The current eye tracking market has not come to its full potential, because there are some issues to deal with. Without doing much research I can already say that the amount of participants, persona's, test time and costs related to this are issues holding it back. But an AI-eye tracing platform will help overcome some of these issues. The question for me now is;

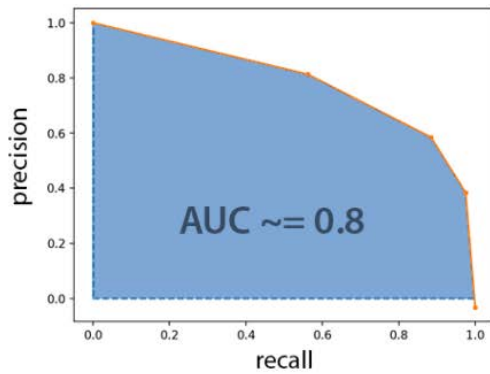
What are the most important issues holding current eye tracking companies back?, what are the issues that companies that use eye tracking for marketing analysis have? Does the eye tracking platform solve these issues? What are future additions to this platform to increase effectiveness & customer satisfaction?

The plan for the project is to create a design roadmap as final result. This way we can create a vision for the future to work towards as a company. As well as to create smaller steps in the near future to create a better product. The use of design roadmapping fits because it looks at what tech trends there are and how and when to develop and implement future technology.

The context of the project. Nowadays advertisements are everywhere, not just your tv, but on your pc and your phone as well. Marketing is getting faster and responds to current events happening in the world, this is for companies to stay relevant. While these companies also want to stay really efficient and not waste money on marketing. This is where the product of Alpha.One comes in to suit these needs, efficiently test your advertisements without wasting much time and money. Another thing I want to take in mind when doing this project is the growing concern about personal advertising and peoples privacy. Society is getting increasingly concerned that they are being watched and spied on by advertising companies because they know so well what they want to buy. This is an ethical implication that is a cause for concern considering this product. This product does not invade on your privacy because it uses AI to predict where people will look and is not based on people their own data. Other companies can not copy easily and harder to catch up if you have the better AI. But it can be that people think being influenced to buy stuff is unethical. This scenario could become an issue in the future, now only marketing people or influencers impact your buying decisions, but if it is based on algorithms it could become dystopian.

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introduction (continued): space for images



	AUC	SIM
Baseline ($\sim\infty$ human)	0.92	1.00
Baseline (1 human)	0.80	0.38
Expoze.IO	0.87	0.60
Baseline (center)	0.78	0.45
SaliencyToolbox*	0.75	0.44
Baseline (chance)	0.50	0.33

Figure 5 (above): A Precision/Recall curve with an AUC of about 0.8.

Figure 6 (below): Qualitative comparison of results. From left to right: original, ground truth, best prediction, second best prediction and worst prediction.



image / figure 1: How the current AI platform competes to human testing

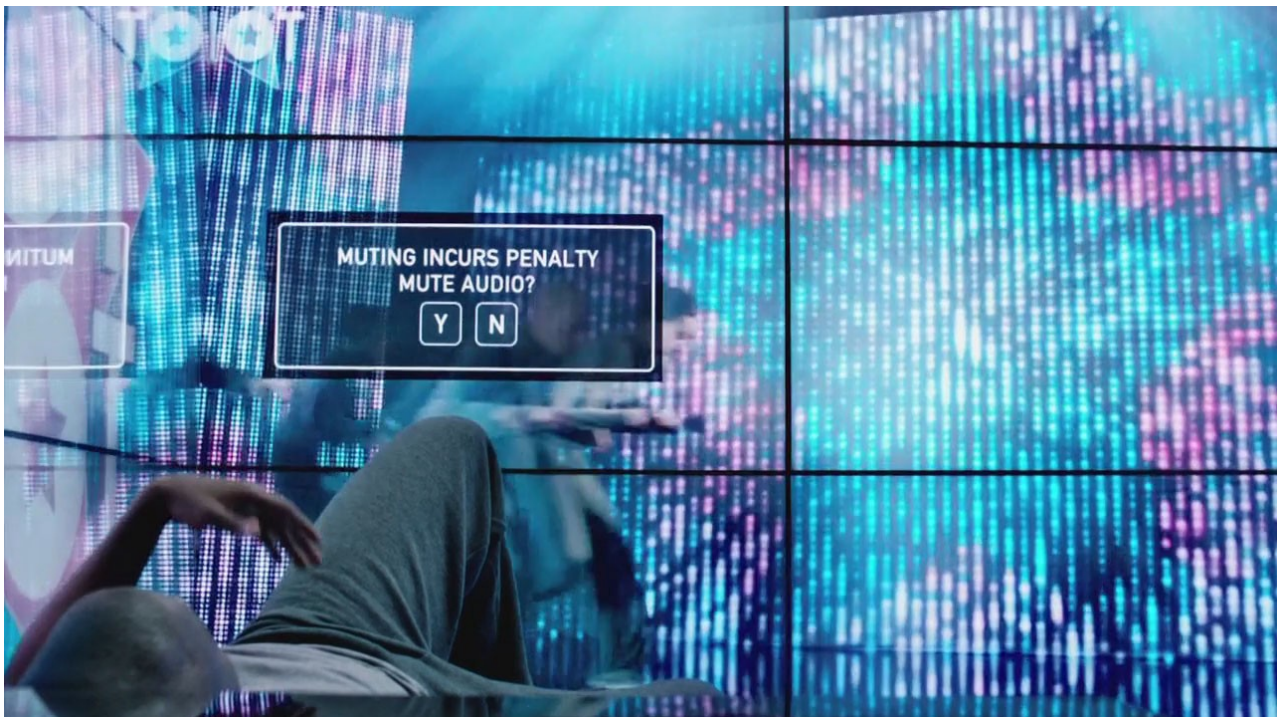


image / figure 2: Black mirror episode of dystopian future, where muting the sound of an ad costs you money.

PROBLEM DEFINITION **

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

The Expoze platform currently only has the functionality of creating an heatmap of where people would look as shown in figure 1. But testing with real consumers they can also relate emotion to where someone is looking, this is especially useful for video analysis. This is something that still needs to be implemented in the AI platform. In the future there could be more functionality that the user of the platform would like to see. As the platform is based on AI there could be some new interesting opportunities to implement new features that would not be possible with real human testing. For me is to find out where eye tracking tested on real humans is holding the technology back and where opportunities lie for an AI to push it even further forward.

For this new product they have the following questions:
 What will be the next steps for the AI marketing platform Expoze?

sub questions:

1. What is currently holding eye tracking marketing analysis back? (tested on real people)
2. What are the future opportunities when eye tracking is performed by AI?

ASSIGNMENT **

State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

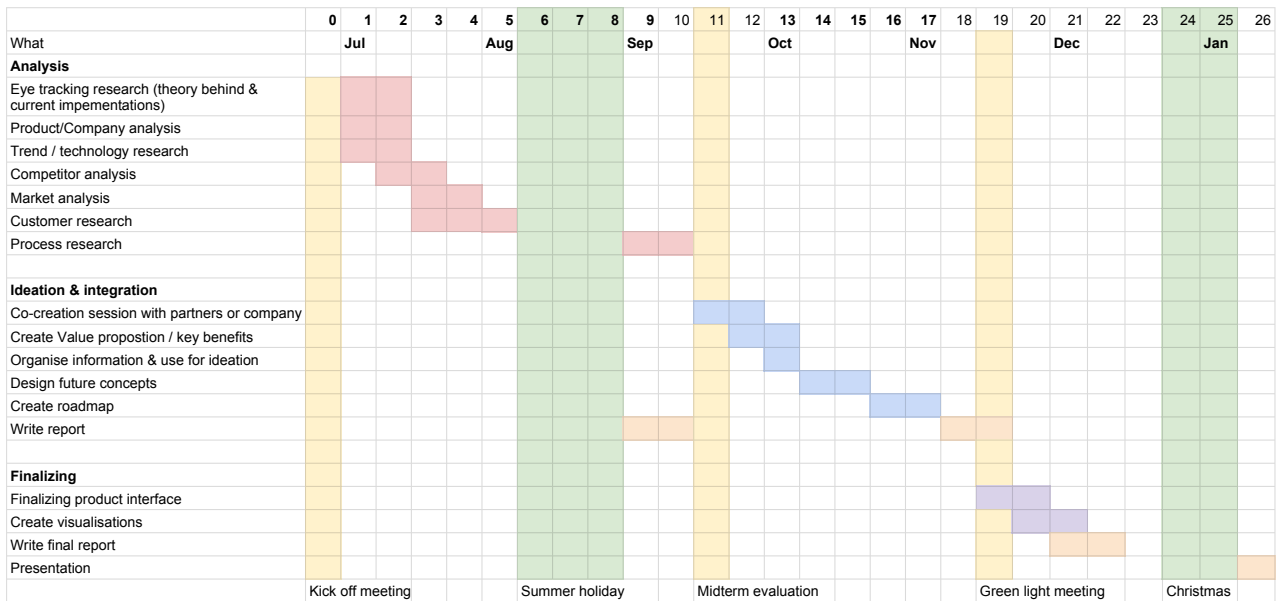
I will analyse the company, research the current marketing analysis and the state of AI. The users of the platform will also be researched on what features they would like in the future. After this I will design future concepts of the platform, varying in future pacing. These will be put on a roadmap and the necessary steps to get there will be outlined.

I would like to design future concepts of the platform, coming up with new features that will help the platform create a better consumer experience. Next to that it is important to design a strategy, the strategy will be designed as a roadmap. In this roadmap the future concepts will be layed out over time, with steps how to develop the technology necessary and with accurate time-pacing. This will help the company to move forward and actually create the concepts that are created.

PLANNING AND APPROACH **

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.

start date 01-07-2020 16-01-2021 end date



The outcome would be a roadmap with a future vision and steps to work towards that future vision.

The analysis phase is up first, to find the problems with current eye tracking solutions and what the new AI platform has to offer in terms of opportunities.

Afterwards the ideation & integration phase. The research will first be processed in written report and in visualizations. This will be used to ideate and create new concepts and ideas to fit the platform. These ideas then will be integrated on the strategy roadmap and value proposition.

After this is finalization, here the concepts will be made presentable as well as the roadmap. Meanwhile the final report will be written and finalized. After the Christmas holiday will be the final presentation.

MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, Stick to no more than five ambitions.

I am personally really interested in psychology, this is why I chose a company that does Neuromarketing. It uses psychology to create better marketing. Also I am interested in smaller companies because in these companies you can make more impact as a graduation student than interning at Philips.

I've learned to do roadmapping, but in a more conceptual design. This time I really want to make in implementable, so that the company can actually use it across several teams to have a common goal to work towards.

1. I would like to co-create, but this is something that might not be possible due to the coronavirus
2. Quickly iterate whilst doing co-creating (which I think is a big challenge due to slow response time of co-creation partner)
3. Create a big impact in a small organization

Another personal goal of mine is to be able to let go when i am done for the day. I have the tendency to get obsessed and start overthinking when it is my time off. This causes me a lot of extra stress which is not necessary and it makes me lose sight of the holistic picture of the project. The overthinking gets me deeper in the subject, which in turn makes me lose sight of the holistic picture, this is what I want to prevent.

A challenge of the graduation project is also working alone, this is why I want to do co-creation as well, because "sparring partners" are needed in the creative process. I have never done co-creation myself so this is a chance for me to learn how to lead creative sessions, which will be beneficial if I will ever work in a team that does not consist of people that have done a creative study.

FINAL COMMENTS

In case your project brief needs final comments, please add any information you think is relevant.