Project Proposal – Internship

Version: 7
Period: Spring 2023

Goal and use of this document

The proposal is used to describe a practical research internship which is carried out in semester 5 of the study program. Through this form the student requests approval for the assignment from the internship coordinator. This document is also used to receive feedback from client and coordinator and should lead to all three parties having one single view of the assignment. The student is responsible for writing the content, based on input of the organization and feedback of the coordinator. This document may be written in Dutch.

Student details

Student number	: 4471709
First name + Family name	: Johnson Domacasse
Location	: Eindhoven
Profile Semester 3	: Technology
Specialisation Semester 4	: Smart Industry
Internship choice	: Smart Industry
Dutch-speaking?	: Yes

Internship period

Start date	: 02/09/2024	(official start date: Monday FHICT-week 1)
End date	: 24/01/2025	(official end date: Friday FHICT-week 18)

Organisation details

Name	: Fontys University of Applied Sciences
Visiting address	: **<fill in once location is known>**
Zipcode + City + Country	: **<fill in once location is known>**
Phone	: 08850 80000
Website	: https://www.fontys.nl
Own Company (“Eigen bedrijf”)?	: No

Company mentor

(The person who guides the student on a regular basis)

First name + Family name	: **<fill in your answer>**
Department	: **<fill in your answer>**
Position	: **<fill in your answer>**
Background (highest education)	: **<fill in your answer>**
Background URL (e.g. LinkedIn)	: **<fill in your answer>**
Phone	: **<fill in your answer>**
Email	: **<fill in your answer>**
Assignment in ASAM?	: No

Project Proposal – Internship

Version: 7
Period: Spring 2023

1. Context & Problem/Opportunity

1.1 Context & Background

Fontys University of Applied science has various studies available for students to choose from such as ICT, mechanical engineering, mechatronics engineering and so forth. Naturally they would want to advertise themselves to both companies and incoming students. The students are responsible for making new innovative systems and projects. Currently one of these projects is the "Flexible Automated Future Factory (FLUFFY)".

The problem arises when Fontys wants to showcase this system. Due to its large size, it is difficult to relocate and showcase to companies. For this reason the project "Mini-Fluffy" was begun. The mini-fluffy, as the name states, is a miniature version of the FLUFFY system with only the base of the factory in place. The mini-fluffy is an excellent way to showcase the main fluffy system because of its size making it easy to transport around. This project was a combination of mechatronics students building the system and programming it with simple functionalities and ICT students refining this program and added more in-depth logic and providing HMI functionalities.

1.2 Current situation & Stakeholders

The current situation regarding the activities, problems (or opportunity) is described. The relevant stakeholders within the organization are provide with an explanation why they (possibly) are stakeholders. The scope of the project must become clear at this point. ***<REMOVE WHEN DONE>***

At present, the mini-fluffy system has the main functionalities of conveyor movement, solenoid triggers, sensor readings and transfer units working. This was all done using PLC programming on TIA PORTAL from Siemens by the previous ICT & technology students. What is missing from the system is the robotic arms, that grab the pallets form the raised solenoids to perform actions on.

<fill in your answer regarding stakeholders>

1.3 Problem/opportunity description

The problems/opportunities, possible causes and impact or effects of these problems/opportunities are described. Concrete examples are given and the depth and scope of the situation is made clear. In this section it should become clear what the added value of the internship will be.

The context of the assignment is to connect a robotic arm to the system and program this again using the built-in PLC to program the functionality of this arm.

<give a more refined answer after meeting with Randy & Omar>

2. Assignment

2.1 Desired project result

Below it should be clear what the desired result of the internship is. What situation should be reached at the end of the internship?
<***TO BE DISCUSSED WITH RANDY & OMAR***>

Project goal
A clear and as concrete as possible description of the intended results and what value they should have for the organization. A (concept) project goal can be formulated and products to be delivered are indicated.
<***TO BE DISCUSSED WITH RANDY & OMAR***>

Project IT-deliverable
Specifically indicate the IT-products (proof-of-concept) that will be developed. Describe the end product as well as any intermediate products or other deliverables that are already known. For each IT-deliverable, specify the technology(s) to be used.
<**TO BE DISCUSSED WITH RANDY & OMAR> (PoC, Research Report, Implementation plan (timestamps), training plan (how to manual)).**

2.2 Research aspects

Research questions
As it is important that all results are based upon (also practical) research: Which research questions are going to be relevant in order to achieve the desired project result? Provide (sub)-research questions and possibly a main research question.
<**FILL IN AFTER THE SCOPE IS COMPLETELY CLEAR>**

Research approach
Regarding the DOT Framework: give a first indication of which research strategies and methods will be used and/or will be the most important ones. Think of the possibilities your internship environment specifically has or lacks and how you can in any case ensure you have enough methods and strategies to use.
<FILL IN AFTER THE SCOPE IS COMPLETELY CLEAR>

3. Guidance & Expertise

Coach/Mentor

What background does your company mentor have? Think of education (Bachelor/Master/Phd) as well as experience in (internship) coaching or mentoring. How many hours of guidance will there be per week and will you be coached?

<***TO BE FILLED IN ONCE MY MENTOR/COACH IS KNOWN***>

Expertise / Guidance

What expertise is available in the company and who has that expertise? What kind of support does the company provide on IT skills related to your domain? Describe the people and/or teams or departments where you are able to go to and who will help and guide you with (IT)-domain related questions, advice and review.

<***TO BE FILLED IN ONCE MY MENTOR/COACH IS KNOWN***>

4. Personal & Professional goals

Which aspects on personal or professional development will you further develop? Focus on soft-skills. Select a realistic three to five aspects to work on. Use previous feedback received from others (e.g. semester coaches and teachers as input).

Personal goal	Describe what exactly you want to achieve and how to work on this.
Communication skills	improve my ability to effectively communicate technical concepts and project updates to both technical and non-technical stakeholders within the organization. This can include improving my presentation skills, active listening, and adapting my communication based on the audience.
Problem-Solving skills	Improve my problem-solving abilities by look at a problem from different angles during the project utilising critical thinking skill and collaborating with my colleagues to come up with different solutions.
Networking	Develop my own networking skills by actively trying to come into contact with professionals within the industry. I am also looking to expand my current network with more professionals from different fields as well, in this case mechanical based professionals.
Self-reflection	Make it a habit to regularly reflect on myself, both as a professional and as a person. This can help me detect areas where I can improve on myself more frequently. This can help me grow as a person and become a better professional at what I do.
Creativity and Innovation	Improve my ability to think of other solutions from different angles. This can help me experiment with different outcomes and see which out of the solutions is best suited for the situation.
Industrial Automation	Improve my skill on PLC programming acquired from the previous semester. Improve my ability to write more modular, and robust PLC programs. Additionally learn as much as I can on the topic, while learning more about electronic and mechanical skills acquired from previous studies.

5. (Optional) other important remarks