

Graduation proposal 1/14/2024

StudentDetails

Name	Almasri, Ammar A.
Student number	4052900
Student upn	I447874@fhict.nl
Study mode	Fulltime
Location	Tilburg

Main choices

HboiLayer	Software
Motivation for choosing this HBO-I layer	
ItAreaName	
Continue personalized program?	No
Preferred language during internship	Dutch

OrganisationDetails

Type of company/institution	ExternalCompany
Name	Truck support
Visiting address	Olivier van Noortweg 1
Zipcode	5993 SL
City	Maasbree
Country	The Netherlands
Phone	0773872662
Website	https://www.trucksupport.eu/

CompanyMentor

First name + Family name	Bas van de Meerakker
Department	Software
Position	Software engineer & Owner Victis BV
Background (highest education)	
Background URL	https://www.linkedin.com/in/bas-van-de-meerakker-2a4b7a1/?originalSubdomain=nl
Phone	+31641431444
Email	bas.van.de.meerakker@victis.nl

InternshipDuration

Choose duration of internship	20 weeks
Choose startmoment of internship	Week 1

AsamAssignment

ASAM assignment	No
If yes, link to assignment in ASAM	

ProjectDescription

Title

Advancing Tire Procurement with Data Insights

1. Problem/opportunity analysis

Describe the company and the context they operate in. Who are the different stakeholders involved? Are there related projects? What problem(s) or opportunities are relevant for your assignment, and why? Describe the starting situation. Who is affected by the problems? Etc.

Company and Context:

TRUCK SUPPORT Venlo stands as your dependable ally for the upkeep and restoration of trucks and trailers, including damage repair. Alongside their specialized tire service, TIRE SUPPORT Venlo, they provide a comprehensive maintenance solution encompassing trucks, trailers, and tires.

Stakeholders Involved:

- Warehouse Manager: He/She handles tire inventory and responsible for buying tires at the best prices and conditions.
- Suppliers: Various tire suppliers offer different prices and terms.

Problem Description:

The main problem is the lack of effective tools specifically designed for the analysis of truck tires, especially compared to the car tire sector, which benefits from advanced and diverse tools. This situation poses both a problem and an opportunity for Truck Support and its warehouse managers. Currently, they face limitations due to the lack of a custom system that meets the unique needs of truck tires.

Current tire comparison market solutions largely focus on car tires and do not adequately cover truck tires, especially when it comes to historical price trends and an extensive range of supplier options. This gap in the market impacts Truck Support's ability to make informed and strategic decisions regarding tire purchasing, impacting operational efficiency and cost-effectiveness.

The proposed project aims to address these challenges by developing a specialized tool for the purchase of truck tires. This tool aims to provide detailed insight into tire prices and availability, track historical price trends for better forecasting, and provide smarter features such as notifications for ideal purchase times. Furthermore, it is designed to integrate seamlessly with

Truck Support's existing workshop management systems, improving overall operational synergies.

This initiative not only fills a significant gap in the truck tire market, but also aligns with Truck Support's broader goal of using technology to improve efficiency and decision-making. It has the potential to position Truck Support as a leader in technological innovation in the transport and logistics sector.

2. Assignment

Specify initial assignment, goals, scope, products to be delivered/realized, technology to be used.

The warehouse manager wants to have a dashboard for an overview of all tire prices from different suppliers. Some suppliers have publicly accessible data, while others send their product information via email. With some suppliers it is necessary for a customer to create an account to gain access to the necessary data. The aim of my graduation internship is to reduce the problem of high tire purchasing costs. During my internship I will try to solve this problem and come up with an efficient solution, possibly by developing a scraping bot or by other methods. This will be further elaborated in the analysis phase.

3. Relation to research

Which areas of the assignment are expected to require a research attitude? What could be related research questions?

Data Collection Techniques:

- How to efficiently collect tire price data from various sources, including websites and emails?

Web Scraping and Legal Considerations:

- What are the best web scraping methods, and what legal issues must be considered?

Database Design:

- How to design a database that efficiently stores and retrieves diverse tire pricing data?

Dashboard Development Tools:

- Which tools and frameworks are best for creating an interactive and user-friendly dashboard?

Data Analysis Algorithms:

- How to develop algorithms that analyze tire prices and suggest cost-reduction strategies?

Security and Privacy:

- What security and privacy measures are needed when handling supplier data?

Performance Optimization:

- How to ensure the dashboard is optimized for performance and can handle data scalability?

4. Guidance

What kind of support does the company provide on personal and IT skills related to your domain? How will you be mentored? What background (Bachelor/Master/Phd) does your company mentor have and what expertise is available in the company? How many hours of guidance per week?

During my internship at Truck Support, I will be supported in developing my personal and technical skills. Mentorship will be provided by Bas van de Meerakker, who is not only an alumnus of Fontys University of Applied Sciences and Utrecht University with a focus on technical AI but is also the owner of Victis BV. This combination of academic background and business leadership will provide me with a valuable perspective on the industry. I am scheduled to receive two hours of mentoring per week to assist with learning and project progress. However, mentoring hours may be more if needed and always available.

5. Personal development goals

Which aspects on personal or professional development will you further develop? Select a realistic three to five aspects to work on. This can be aspects that you are already good at and you want to improve or skills that are not yet on an acceptable minimal level. Document how your plans fit in your assignment and how you will work on it in more detail. Use previous received feedback/ feedforward from others (e.g. semestercoach/mentor as input).

#	Goal	AchievementDescription
1	Refinement of Programming Skills	Focus on improving my skills in specific programming languages and technologies used in the project, such as Python for the scraping bot and JavaScript (React) for the front-end development.
2	Understanding Microservices Architecture	Develop a deeper understanding of microservices architecture and how to implement it effectively in software projects.
3	Project management	Developing competencies in project planning, time management and coordinating various aspects of a software development 1project.
4	Data Analysis and Visualization	Learn how to analyse and visualize data effectively, which is essential for building the dashboard in the software.
5	Communication Skills	Improve my ability to clearly communicate technical concepts to non-technical stakeholders, such as the warehouse manager and other team members.

6. (Optional) other important remarks