

Anmälan om examensarbete grundnivå och avancerad nivå 9-30 hp¹

Registration final project work first- and second-cycle 9-30 credits¹

Ämne²/huvudområde³ Subject²/main field of study³: Click or tap here to enter text.

Studenter/Students

Namn student 1 <i>Name student 1</i> Punnoose Kozhuppakalam Thomas	Namn student 2 <i>Name student 2</i> Deepa Krishnan
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Jag har läst "Regler för examensarbete": <i>I have read "Rules for final project work"</i> Ja <i>Yes</i> Yes Nej <i>No</i> Click or tap here to enter text.	Jag har läst "Regler för examensarbete": <i>I have read "Rules for final project work"</i> Ja <i>Yes</i> yes Nej <i>No</i> Click or tap here to enter text.
Jag uppfyller förkunskapskraven enligt kursplan: <i>I fulfil the requirements indicated in the course syllabus:</i> Ja <i>Yes</i> Yes Nej <i>No</i> ⁴ Click or tap here to enter text.	Jag uppfyller förkunskapskraven enligt kursplan: <i>I fulfil the requirements indicated in the course syllabus:</i> Ja <i>Yes</i> yes Nej <i>No</i> ³ Click or tap here to enter text.

Namn student 3 (I exceptionella fall) <i>Name student 3 (exceptional)</i> Click or tap here to enter text.
Personnummer <i>Personal number</i> Click or tap here to enter text.
Program <i>Programme</i> Click or tap here to enter text.
Mobilnummer <i>Mobile number</i> Click or tap here to enter text.
E-post <i>E-mail</i> Click or tap here to enter text.
Jag har läst "Regler för examensarbete": <i>I have read "Rules for final project work"</i> Ja <i>Yes</i> Click or tap here to enter text. Nej <i>No</i> Click or tap here to enter text.
Jag uppfyller förkunskapskraven enligt kursplan: <i>I fulfil the requirements indicated in the course syllabus:</i> Ja <i>Yes</i> Click or tap here to enter text. Nej <i>No</i> ³ Click or tap here to enter text.

Företag/organisation *Company/organisation*

Namn <i>Name</i> Volvo Cars Cooperation
Adress <i>Address</i> SE-40531 Gothenburg
Kontaktperson <i>Contact person</i> Johan Zaya
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E-post <i>E-mail</i> johan.zaya@volvocars.com

Om examensarbetet *On the final project work*

Examensarbetets titel (preliminär) <i>Title of final project work (preliminary)</i> Design and Implementation of an AI-Based Natural Language System to Support Access to Vehicle Data at Volvo Cars
Projektbeskrivning godkänd av företag/organisation <i>Project description approved by the company/organisation</i> Ja <i>Yes</i> Yes Nej <i>No</i> Click or tap here to enter text.

Handledare, examiner (fylls i av kursansvarig) *Supervisor, examiner (filled out by course coordinator)*

Handledare <i>Supervisor</i> Click or tap here to enter text.
Examinator <i>Examiner</i> Click or tap here to enter text.

Godkännande (fylls i av handledare och examiner)⁵ *Approval (filled out by supervisor and examiner)⁴*

Handledare <i>Supervisor</i> _____ Datum <i>Date</i> Click or tap here to enter text.
Examinator <i>Examiner</i> _____ Datum <i>Date</i> Click or tap here to enter text.

Vid avbrutet examensarbete (fylls i av kursansvarig)⁶ *Termination of final project work (filled out by course coordinator)⁵*

Examensarbete avbrutet <i>Termination of final project work</i> Datum <i>Date</i> Click or tap here to enter text.
Anledning till att examensarbete avbryts <i>Reason for termination</i> Click or tap here to enter text.

Projektbeskrivning mall Mer information under rubrik "Förklaring projektbeskrivning" *Project description template More information under heading "Explanation project description"*

Introduktion *Introduction*

The student shall perform the Study which entails:

Develop an AI chat bot with the ability to support data users regarding availability of data. The data is collected from vehicles, e.g. employee benefit vehicles or test vehicles, and is used to support data driven decisions. The aim of the study is to improve efficiency and accuracy to data requests from potential users of the data. Furthermore, the study shall be a holistic approach of the complete journey of developing and implementing AI solutions to identified needs within Volvo Cars, e.g. approval of AI tools, data governance and quality assurance of data.

Bakgrund *Background*

Volvo Cars is engaged in research, development, manufacturing, and commercialization of automotive solutions and continuously Collects large volumes of vehicle data from sources such as employee benefit vehicles and test vehicles. This data is used to support Data-driven decision-making within the organization. However, accessing and understanding the availability of relevant vehicle data currently requires manual effort and domain knowledge, which can reduce the efficiency and accuracy when responding to internal data requests. To address this, Volvo Cars has identified a need for an AI-based solution that can assist internal data users in discovering and understanding available vehicle data.

Syfte och frågeställningar *Purpose and research questions*

The purpose of the study is to investigate how an AI-based chatbot system can be designed and implemented to support internal data users in querying and understanding the availability of vehicle data, thereby improving efficiency and accuracy in data-driven decision-making at Volvo Cars.

Implied Research Question:

How can AI-based natural language system be designed and implemented to efficiently and accurately support internal users in accessing and understanding the availability of vehicle data within an industrial automotive organization?

Företagets/organisationens mål *The objective of the company/organisation*

The objective of Volvo Cars in this study is to improve the efficiency and accuracy of responses to internal data requests by enabling Better access to vehicle data through AI-based support tools. Additionally, Volvo Cars aims to evaluate the complete lifecycles of developing and implementing AI solutions within the organization, including considerations related to approval of AI tools, data governance and data quality assurance.

Metod *Method*

Click or tap here to enter text.

Teorier *Theories*

The study implicitly relates to the following theoretical and conceptual areas:

- Artificial Intelligence-based decision support systems
- Natural language interfaces to data
- Human-computer interaction in Data Systems
- Data governance and quality management
- AI system lifecycle management in industrial contexts

These theories underpin the study's focus on using AI to support human users in accessing and interpreting complex datasets while ensuring governance and quality requirements are met in an enterprise environment.

Relevans för huvudområdet *Relevance to the main field of study*

This study is directly relevant to the field of Artificial Intelligence Engineering and applied data science, as it involves the design, implementation, and evaluation of an AI-based system for real-world use. It integrates core AI topics such as natural language processing, data-driven decision support, and system evaluation, while also addressing practical considerations such as AI governance, data quality, and organizational deployment. The project therefore bridges theoretical AI concepts with applied industrial implementation in the automotive domain.

Tidslinje *Time-line*

Click or tap here to enter text.

Ytterligare information *Additional information*

Click or tap here to enter text.

FÖRKLARING PROJEKTBESKRIVNING

BAKGRUND

Projektbeskrivningen hjälper examinator att bedöma examensarbetets omfattning och lämplighet, men hjälper även studenten att ställa upp ett tydligt mål och därmed snabbare komma till avslut. Läs igenom bedömningsmallen för betygsättning innan projektbeskrivningen skrivs.

INNEHÅLL

Projektbeskrivningen ska innehålla nedan angivna rubriker och information:

Introduktion Beskriv ämnet som examensarbetet behandlar.

Bakgrund

- Beskriv problemet som ska studeras (problembeskrivning)
- Beskriv varför problemet är viktigt (ej högskoleexamen)
- Ange den nya kunskap som examensarbetet är tänkt att leda fram till (ej högskoleexamen)

Syfte och frågeställningar Formulera syfte och frågeställningar utifrån problembeskrivningen.

Företagets/organisationens mål Beskrivet det mål/problem som kommer att lösas åt företaget/organisationen. Bifoga företagets kravspecifikation. Observera att detta ofta löses som en praktisk del i exjobbet, vilket också ger indata till studien, medan hela examensarbetets syfte vanligen har en mer generell karaktär.

Metod Beskriv och motivera det systematiska sätt som ska användas för att genomföra studien.

Teorier Beskriv vilka teorier som ska användas.

Relevans för huvudområdet (endast avancerad nivå). Ange hur ämnet bygger på tidigare kurser i huvudområdet inom programmet.

Tidslinje De olika arbetsmomenten och fördelning mellan dem, exempelvis avseende förstudie, datainsamling, litteraturgenomgång, framtagande av prototyp, analys, rapportskrivning.

Ytterligare information Övrigt som kursansvarig kan behöva veta för att bedöma ansökan och tilldela handledare och examinator, t ex om någon kurs saknas för att uppfylla förkunskapskraven enligt kursplanen.

EXPLANATION PROJECT DESCRIPTION

BACKGROUND

The project description enables the examiner to determine the extent and suitability of the thesis, whilst also helping the student to identify a clear goal for the thesis and completing of the process faster. Read the degree project assessment template before completing the project description.

CONTENT

The project description shall contain the headings and information indicated below:

Introduction Describe the topic of the final project work.

Background

- Describe the problem that is to be studied (problem description)
- Explain why the problem is important (higher education diploma excluded)
- Identify likely new knowledge (higher education diploma excluded)

Purpose and research questions Formulate the purpose and associated questions with the problem description as a starting point.

The objective of the company/organisation Describe the objective/problem that will be solved for the company/organisation. Attach the requirement specifications of the company/organisation. Note that the problem of the company/organisation is often solved as part of, and provides data to, the final project work, while the aim of the whole final project work normally is of a more general character.

Method Describe and motivate the systematic way that will be used to conduct the study.

Theories Describe the theories that will be used

Relevance to the main field of study (master level only). State how the topic builds on the content of courses in the main field of study of the programme.

Time-line The stages of work and the division between, e.g. feasibility study, information gathering, literature review, prototype construction, analysis, writing of the report.

Additional information Other information that the course coordinator needs to be informed about to determine the application and appoint supervisor and examiner, e.g. if a course required in the prerequisites of the course plan has not been completed.

¹ 9 hp avser högskoleexamen, 15 hp avser högskoleingenjör- och kandidatexamen samt ettårig masterexamen, 30 hp avser tvåårig masterexamen. Antalet poäng avser poäng per student. *9 credits for higher education diploma, 15 credits for degree of bachelor of science in engineering, degree of bachelor and degree of master (one year), 30 credits for degree of master (two years) The number of credits refers to number of credits per student.*

² Högskoleexamen: 3D-teknik eller möbeldesign. *Higher Education diploma: 3D technology or furniture design.*

³ Högskoleingenjör-, kandidat- och masterexamen: Byggnadsteknik, Datateknik, Informatik, Maskinteknik eller Industriell organisation och ekonomi. *Degree of bachelor of science in engineering and degree of bachelor: Civil Engineering, Computer Engineering, Mechanical Engineering or Industrial Engineering and Management.*

⁴ Information om vad som saknas anges i projektbeskrivningen under rubrik "Ytterligare information". I exceptionella fall kan ansökan om examensarbete beviljas om förkunskapskraven inte är uppfyllda beroende på vilken kurs som saknas. *Information about missing courses is provided under the heading "Additional information". In exceptional cases, the application may be accepted if the prerequisites are not fulfilled depending on the course/s missing.*

⁵ Godkännande av både handledare och examinator nödvändiga för att få påbörja examensarbetet. Information om godkännande kan exempelvis kommuniceras via mejl eller lärplattformen. Erbjuden handledning gäller för den period kursen ges. *Approval by both supervisor and examiner necessary to begin the final project work. Information about the approval may e.g. be communicated through mail or the learning management system. The supervision offered applies to the period during which the course is given.*

⁶ Kursansvarig kan avbryta examensarbetet och frigöra handledare exempelvis om studenten påbörjar nytt examensarbete (ny ansökan krävs) eller om ett år har passerat från start. Information om avbrutet examensarbete kan exempelvis kommuniceras via mejl eller lärplattformen. *The course coordinator can terminate the final project work if, e.g., the student begins a new final project work (in which case a new application is required) or if one year has passed since the start. Information about termination of the final project work may e.g. be communicated through mail or the learning management system.*

