HALMSTAD UNIVERSITY
Phone +46 35 16 71 00 - www.hh.se
School of Information Technology

AI for Executives 2.5 credits

AI för chefer 2.5 hp

Second cycle
Main field: Computer Science and Engineering, Second cycle, has only first-cycle course/s as entry requirements (A1N)
Syllabus is adopted by the Research and Education Board (2024-03-20) and is valid for students admitted for the autumn semester 2024.

Placement in the Academic System

The course is given as a single subject course.

Prerequisites and Conditions of Admission

Degree of Bachelor or Degree of Bachelor of Science in Engineering. The degree must be equivalent to a Swedish kandidatexamen or Swedish högskoleingenjörsexamen and must have been awarded from an internationally recognised university. English 6. Exemption of the requirement in Swedish is granted.

Course Objectives

The objective of this course is to provide a realistic picture of AI to top-level managers and executives and teach them some non-technical explanations of some essential tools in AI. They will learn how to set a strategy for data collection and AI, how to make an AI unit or team, and how they can move forward from a traditional product/service company to an AI-based company.

It is expected that at the end of the course, top-level executives and leaders become equipped with enough knowledge to start their AI journey. They also are expected to be able to act more intelligently in negotiation with AI product/service providers and make better decisions in their investment on AI.

Following successful completion of the course the student should be able to:

Knowledge and understanding

- identify suitable applications of AI in a business organization
- differentiate between process automation, narrow AI, and general A

Skills and ability

- identify the right AI tools for a given problem
- differentiate between a low-risk, high-gain project vs. high-risk low-gain one

Judgement and approach

- judge the risks of implementing AI projects
- choose adequate AI strategies

Primary Contents

Most courses on AI for executives are developed from a business perspective, so they typically do not contain materials about general ideas behind AI methods and their applications. Technical courses on AI also go very deep into the algorithms and mathematics, so they are not appropriate for people without a technical background.
We provide an intermediate approach between these two. We provide some training on the technologies and the ideas behind them and then guide the managers how to apply those technologies in their companies.

The course covers an introduction to AI, AI tools and applications, AI strengths and limitations, what an AI project looks like, and how to move towards an AI-based company.

The introduction allows students from various backgrounds to learn basic concepts in AI, data science, and machine learning from a non-technical point of view, but not that shallow to not being able to differentiate different technologies. Then, the students are familiarized with some of the essential AI tools, such as machine learning, deep learning, and others. Students will learn about the rationale and ideas behind the AI tools and their applicability. Examples are given of what AI can do and cannot do. Ethical issues and challenges are covered, such as privacy, discrimination, and security. In the final parts, the main components of a successful AI project are outlined, and how to move forward towards an AI-based company and the issues and challenges a traditional may face in this journey. Students are expected to bring real case studies from their organizations and discuss the strengths and limitations of AI in their case studies of interest.

Teaching Formats

Teaching consists of lectures, assignments, knowledge checks, interview videos, and further readings.

Teaching is in English and wholly online.

Examination

The overall grades of Fail or Pass will be awarded for the course.
The examination will be a project with a written report.

Name of the test		Grading
Project Report	2,5 credits	U/G

If there are special reasons, the examiner may make exceptions from the specified examination format and allow a student to be examined in another way. Special reasons can e.g. be a decision on learning support.

For elite sports students according to Riktlinjer för kombinationen studier och elitidrott vid Högskolan i Halmstad, DNR: L 2018/177, the examiner has the right to decide on an adapted examination component or let the student complete the examination in an alternative way.

Course Evaluation

Course evaluation is part of the course. This evaluation should offer guidance in the future development and planning of the course. Course evaluations should be documented and made available to the students.

Course Literature and Other Study Resources

Russell, Stuart, and Peter Norvig. *Artificial intelligence: A modern approach*. Pearson Higher Ed, 2013

Burgess, Andrew. *The Executive Guide to Artificial Intelligence: How to identify and implement applications for AI in your organization*. Springer, 201