Perspectives of Digital Marketing Technologies
Course Syllabus

1 General Information

Course name: Perspectives of Digital Marketing Technologies

Course code: MAR

Number of credits: 2

Instructors:

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2 Objectives

The course aims to provide students with an overview of digital marketing technology, development trends, and applications in increasing marketing intelligence for businesses in the modern business context. In particular, the course will emphasize the application of artificial intelligence in marketing activities

3 Abstract

The course focuses on the role of artificial intelligence in creating value for the business: the emphasis is placed on creating and capturing value, identifying customer needs and understanding purchasing processes, forming target segments, positioning the product, and managing brand equity... Topics to be covered include advertising and communicating the product, distributing the product, pricing the product, and market research.

We will use cases, discussions, readings, guest speakers, and seminars to provide a mix of theory and hands-on problem solving to a variety of digital marketing technologies issues. It is assumed that students have a basic understanding of artificial intelligence and digital marketing technologies. The course is designed to be an introduction to the theory and application of artificial intelligence. Artificial Intelligence for Marketing presents a tightly focused on machine learning, written specifically for marketing professionals. This course will not teach students to be data scientists—but it does explain how Artificial Intelligence and Machine Learning will revolutionize many company's marketing strategies, and how to use them most effectively.

4 Teaching and learning methods

Lectures: 22h

In class discussion & practice: 8h

5   Prerequisites

Digital Marketing

6   Learning Outcomes

Overall, data and analytics have become table stakes in modern marketing, but the field is ever-evolving with data scientists continually developing new algorithms. How can marketers use the latest data-science technologies developments to their advantage?

This course walks students through the "need-to-know" aspects of Artificial Intelligence, including natural language processing, speech recognition, and the power of Machine Learning to show you how to make the most of this technology in a practical, tactical way. Simple illustrations clarify complex concepts, and case studies show how real-world companies are taking the next leap forward. Straightforward, pragmatic, and with no math required, specifically, on successful completion of this unit a student will:

6.1.1   *Understand Artificial Intelligence and its advantages in marketing*

6.1.2   *Understand Machine learning technology*

6.1.3   *Understand how marketers can make use of Artificial Intelligence and Machine learning technology to solve the Marketing Problem*

6.1.4   *Be able to help the company gain a competitive advantage by leveraging leading-edge technology in marketing*

7   Assessment Criteria

Learning outcomes On successful completion of this unit a student will:	Assessment criteria for pass the student can:
- *LO1 Understand Artificial Intelligence and its advantages in marketing* 7.1.1	- Explain the definition of Artificial Intelligence and the growing complexity of Artificial Intelligence - Explain the role and value of Artificial Intelligence - Discuss its advantages in business practices

- *LO2 Understand Machine learning technology* 7.1.2	- Explain the definition of Machine Learning - Understand Machine Learning is that it was designed to learn, not to follow strict rules - Understand those marketers who need to work properly even though they are not data scientists, algorithm magicians, or predictive analytics statisticians.
- *LO3 Understand how marketers can make use of Artificial Intelligence and Machine learning technology to solve the Marketing Problem*	- Understand Artificial Intelligence will give the ability to match information about the product with the information prospective buyers need at the moment and in a format, they are most likely to consume most effectively - Understand Artificial Intelligence will be the job to make use of it in ways that raise revenue, lower costs, increase customer satisfaction, and improve organizational capabilities.
- *LO4 Be able to help the company gain a competitive advantage by leveraging leading-edge technology in marketing* 7.1.3	- Understand Artificial Intelligence and Machine Learning provide a data-driven basis for more robust and intensely targeted marketing strategies—and companies that effectively utilize these latest tools will reap the benefit in the marketplace. - Understand Artificial Intelligence for Marketing provides a nontechnical crash course to help businesses stay ahead of the curve.

8 Outlines

Chapter 1 Welcome to the Future

1.1 Welcome to Autonomic Marketing

1.2 Welcome to Artificial Intelligence for Marketers

1.3 Whom Is This Book For?

1.4 The Bright, Bright Future

1.5 Is AI So Great if It's So Expensive?

1.6 What's All This AI Then?

1.7 The AI Umbrella

11.4 Data as a Competitive Advantage

11.5 How Far Will Machines Go?

11.6 Your Bot Is Your Brand

11.7 My AI Will Call Your AI

11.8 Computing Tomorrow

9 Required Textbooks

Sterne, J. (2017), *Artificial Intelligence for Marketing_ Practical Applications*, Wiley

10 Suggested Textbooks

Peter Gentsch (2019) *AI in Marketing, Sales and Service: How Marketers without a Data Science Degree can use AI, Big Data and Bots* 1st.Edition "

11 Schedule

Slot	Main contents	Specific contents and activities	Student's tasks before and after class
1	**Chapter 1 Welcome to the Future**	• Course Introduction: outline and schedule, assessment overview, course materials and guide on assignments, assessment criteria • The definition of artificial intelligence and the growing complexity of artificial intelligence • The role and value of artificial intelligence • Overview of machine learning, including the amazing opportunities and the significant risks associated with being an early adopter, and why AI has finally become a reality, including the amazing opportunities and the significant risks associated with being an early adopter, and why AI has finally become a reality. *Activity* - Discuss artificial intelligence to put it to practical use without having to get a degree in data science	Before class: • Reading the course's syllabus • Reading Part 1, Section 1 to 13, *Artificial Intelligence for Marketing_ Practical Applications (2017), Wiley*, Sterne, J. pp. 1-56

Slot	Main contents	Specific contents and activities	Student's tasks before and after class
2	**Chapter 2** **Introduction to Machine Learning**	• *Machines Are Big Babies* • *Where Machines Shine* • *Strong versus Weak AI* • *The Right Tool for the Right Job* • *Make Up Your Mind* • *One Algorithm to Rule Them All?* • *Accepting Randomness* • *Which Tech Is Best?* • *For the More Statistically Minded* • *What Did We Learn?* *Activity* - Discuss topics : Where did AI come from? What makes it so special? What is it not good for? What different types of AI can be used for different purposes?	Before class: • Reading Part 2, Section 1 to 10, *Artificial Intelligence for Marketing_ Practical Applications (2017), Wiley,* Sterne, J. pp. 56-69
3	**Chapter 2** **Introduction to Machine Learning** *(cont.)* *Group Assignment Coaching*	*Activity* - Discuss the defining questions of computer science are: How can we manually program computers to perform specific functions and solve problems, and which problems are inherently intractable? - Discuss the defining questions of statistics are: What can we infer from historical information to predict the future? What conclusions can be inferred from data? - Discuss the defining questions for machine learning are: How can we build systems that automatically improve with experience? Can we get computers to decide for themselves what computational architectures and algorithms are most effective for manipulating data to reach a specific outcome?	Before class: Formulating the students' groups for the group assignment Reading the requirements of the group assignment • Reading Part 2, Section 1 to 13, *Artificial Intelligence for Marketing_ Practical Applications (2017), Wiley,* Sterne, J. pp. 69-101

Slot	Main contents	Specific contents and activities	Student's tasks before and after class
4	**Chapter 3** **Solving the Marketing Problem**	• *One-to-One Marketing* • *One-to-Many Advertising* • *The Four Ps* • *What Keeps a Marketing Professional Awake?* • *The Customer Journey* • *Marketing Mix Modeling* • *Econometrics* • *Customer Lifetime Value* • *One-to-One Marketing—The Meme* • *Seat-of-the-Pants Marketing* • *Marketing in a Nutshell* *11.1.1 Activity* - Answer students' questions related to the group assignment	Before class: • Reading Part 3, Section 1 to 15, *Artificial Intelligence for Marketing_ Practical Applications (2017), Wiley,* Sterne, J. pp. 103-128
5	**Chapter 4** **Using AI to Get Their Attention**	• *Market Research: Whom Are We After?* • *Marketplace Segmentation* • *Raising Awareness* • *Social Media Engagement* • *In Real Life* • *The B2B World* *Activity* - Discuss AI for marketing for B2B companies - Answer students' questions related to the group assignment	Before class: • Reading Part 4, Section 1 to 6, *Artificial Intelligence for Marketing_ Practical Applications (2017), Wiley,* Sterne, J. pp. 128-158 After class: Do task on preparing report of the group assignment

Slot	Main contents	Specific contents and activities	Student's tasks before and after class
6	**Chapter 5 Using AI to Persuade**	• *The In-Store Experience* • *On the Phone* • *The Onsite Experience—Web Analytics* • *Merchandising* • *Closing the Deal* • *Back to the Beginning: Attribution* _Activity_ - Discuss the customer experience from retail and merchandising to digital analytics and attribution. - Discuss AI is useful for landing-page optimization, A/B testing, and especially for personalization. - Discuss AI can also help a great deal with email, the mainstay of digital marketing. - Answer students' questions related to the group assignment	Before class: • Reading Part 5, Section 1 to 6, *Artificial Intelligence for Marketing_ Practical Applications (2017), Wiley,* Sterne, J. pp. 165-93 After class: Do task on preparing report of the group assignment
7	**Middle exam** *Group assignment tutorial*	• Middle exam • Give advice to students in order to perform the task of group assignment • Answer students' questions related to the group assignment	After class: Do task on preparing report of the group assignment
8	**Chapter 6 Using AI for Retention**	• *Growing Customer Expectations* • *Retention and Churn* • *Many Unhappy Returns* • *Customer Sentiment* • *Customer Service* • *Predictive Customer Service* _Activity_ - Discuss the burgeoning growth of AI-powered bots as customer service agents.	Before class: • Reading Part 6, Section 1 to 6, *Artificial Intelligence for Marketing_ Practical Applications (2017), Wiley,* Sterne, J.

Slot	Main contents	Specific contents and activities	Student's tasks before and after class
			pp. 200-216 After class: Do task on preparing report of the group assignment
9	Chapter 7 The AI Marketing Platform	• *Supplemental AI* • *Marketing Tools from Scratch* • *A Word about Watson* • *Building Your Own* *Activity* - Discuss the largest investments in artificial intelligence are being made by companies already deploying marketing platforms as products/services like the efforts of Salesforce.com, Adobe, and IBM's Watson. - Discuss AI tools for automatic report writing, multi-touchpoint customer journey capture, and website construction.	Before class: • Reading Part 7, Section 1 to 4, *Artificial Intelligence for Marketing_ Practical Applications (2017), Wiley,* Sterne, J. pp. 218-230 After class: Do task on preparing report of the group assignment
10	Chapter 8 Where Machines Fail	• *A Hammer Is Not a Carpenter* • *Machine Mistakes* • *Human Mistakes* • *The Ethics of AI* • *What Machines Haven't Learned Yet* *Activity* - Discuss Artificial intelligence is not perfect and until we get to know how to use it better, there are traps and hurdles to be avoided and overcome. - Discuss errors in human judgment and machine mistakes, both of which cause appalling outcomes. The first obstacle is the data itself.	Before class: • Reading Part 8, Section 1 to 6, *Artificial Intelligence for Marketing_ Practical Applications (2017), Wiley,* Sterne, J. pp. 218-260 After class: Do task on preparing

Slot	Main contents	Specific contents and activities	Student's tasks before and after class
		How data is collected, cleaned, and combined are up for AI improvement. Next, AI has its own problems, including common statistical issues. But the biggest issues are human: unintended consequences, optimizing the wrong thing, the confusing correlation for causation, and doing intentional harm. That's why we also take a hard look at the ethics of artificial intelligence.	report of the group assignment
11	**Chapter 9 Your Strategic Role in Onboarding AI**	• Understand successful AI implementations also depend on change management within the organization. • Describes the best philosophical approach to AI: human augmentation and collaboration. _Activity_ - Discuss Artificial intelligence is not a technology that can be plugged in, turned on, and expected to work. It must be taught and monitored. AI should not be brought in as a monolithic project that tries to convert an entire organization all at once, but rather one task at a time.	Before class: • Reading Part 9, Section 1 to 6, _Artificial Intelligence for Marketing_ Practical Applications (2017), Wiley,_ Sterne, J. pp. 262-286 After class: Do task on preparing report of the group assignment
12	**Chapter 10 Mentoring the Machine**	• Understand Artificial intelligence is a learning system that knows nothing at the start. It must be raised like a child. • _What Problem Are You Trying to Solve?_ • _What Makes a Good Hypothesis?_ • _The Human Advantage_ _Activity_ - Discuss skills like judgment, imagination, and empathy that the machine will not be able to imitate for a long time.	Before class: • Reading Part 10, Section 1 to 4, _Artificial Intelligence for Marketing_ Practical Applications (2017), Wiley,_ Sterne, J. pp. 289-297

Slot	Main contents	Specific contents and activities	Student's tasks before and after class
			After class: Do task on preparing report of the group assignment
13	**Chapter 11** **What Tomorrow May Bring**	• Understand Marketing has changed dramatically as new technologies have become available: the telephone, the computer, the Internet, and now AI. • *The Path to the Future* • *Machine, Train Thyself* • *Intellectual Capacity as a Service* • *Data as a Competitive Advantage* • *How Far Will Machines Go?* • *Your Bot Is Your Brand* • *My AI Will Call Your AI* • *Computing Tomorrow* <u>*Activity*</u> - Discuss AI as a service, crowdsourced AI training, data as a competitive advantage, and more are on the horizon. Looking over the horizon, we see customers owning their own artificial intelligence agents that will negotiate with yours - Answer students' questions related to the group assignment	<u>Before class:</u> • Reading Part 11, Section 1 to 8, *Artificial Intelligence for Marketing_ Practical Applications (2017), Wiley,* Sterne, J. pp. 305-325 <u>After class:</u> Do task on preparing report of the group assignment
14	**Oral presentations of group assignment**	• Oral presentation of group research project by groups of students • Q&A on each research project • Each oral presentation must not be longer than 15 minutes	<u>Before class:</u> • Submitting team project report • Preparing and submitting slides for oral presentation

Slot	Main contents	Specific contents and activities	Student's tasks before and after class
15	Feedback on the group Assignment General review and discussion	• Give comments on the group assignment • Give a general review of the course's contents and discussion	

12 Grading Policy

	Assignment	Importance
1	Class participation/In class activities	10%
2	Midterm exam (individual)	10%
3	Group assignment	30%
4	Final exam (individual)	50%

Class participation

Note: Punctual and regular attendance is a minimum expectation for this course. The students must not be absent more than 20% of total scheduled learning slots.

Midterm exam

In the 12th slot, students will be given a case study/a scenario with some relevance to the search engine marketing topics being discussed, and be asked to discuss or explain their point of view in a limited amount of class time

Group Assignment

This assignment encourages students to apply knowledge and skills in a real case to prove Artificial Intelligence and Machine Learning have changed business activities and their advantages in business practices.

The group research assignment requires students to work with other members in an assigned group to present a report. Learners will choose or be assigned a scenario/a real firm and a group (4-5 members). They will be required to research a real business that addresses multiple aspects of the chosen or assigned scenario/real firm.

Each team task will need to:

- Describes how artificial intelligence can aid businesses activities like selling a product or service are identifying a target market, reviewing the competition, and building up product awareness as well as social media monitoring and engagement, sentiment analysis, public relations, programmatic advertising, search marketing, content management, and so on.

- Describes how customer care and relationship management in businesses activities are greatly helped by AI's ability to identify customer segments and predict behavior (Exemple: Speech recognition and sentiment analysis go a long way to support the customer contact center...)

- Describes how artificial intelligence can lend a hand with all aspects of educating a prospective customer once the business has attracted his or her attention.

- Describe AI can also manage product returns

This situation will likely NOT be solved by a quantitative survey alone. As a result of the group project, each group must deliver a research report and present it. The oral presentation of each group must be no longer than 15 minutes.

Final exam

The final exam in the form of an oral exam will consist of two to three questions. Topics related to the question will be given to students to choose from.

The question can be related to any topic related to Digital Marketing Technologies in the course