Automation and Artificial Intelligence in Marketing
MSMG 70550 | Spring 2024

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Course Description	The convergence of marketing and technology is rapidly reshaping how businesses operate and interact with customers. This course delves deeply into the new digital frontier, exploring the intersection of automation, artificial intelligence, and marketing. Leveraging real-world case studies, we'll demystify machine learning, chatbots, recommendation engines, and more. You will come to understand both the capabilities and the ethical implications of AI in the world of marketing today.
Office Hours	I hold virtual Office Hours on Wednesdays while our class is running. Use this link to schedule a 30-minute meeting with me to discuss the course or anything else on your mind: bit.ly/profh If you need time outside of a Wednesday, just reach out and we can schedule time for us to connect.
Learning Goals	1. Gain a comprehensive understanding of the transformative role of automation and AI in marketing. 2. Understand and evaluate key AI-driven marketing tools and techniques. 3. Design and implement data-driven marketing strategies employing automation and AI. 4. Grapple with the ethical implications of AI-powered marketing decisions. 5. Analyze and assess the impact of AI on marketing metrics and ROI.
Required Materials	This course will be driven by a diverse set of contemporary case studies to ground theoretical concepts in real-world applications, ensuring that you not only understand AI's transformative potential in marketing but also its practical implications and challenges in today's dynamic business landscape. Additional readings (e.g., other case studies and journal articles) may be assigned during the term. These readings will be made available in class or online.
Honor Code	This class is conducted in accordance with the University's Academic Code of Honor. I have a zero-tolerance policy for violations of this policy. To quote from du Lac, "At a minimum, a student found responsible for an Honor Code violation usually fails the assignment in question. A more serious offense may result in failure of an entire course, or suspension or dismissal from the university." My expectation for this course is that you will collaborate with other students during our in-class hands-on exercises. I expect you to complete your individual quizzes and exams on

your own. In your group projects, you are encouraged to discuss general strategies for solving problems with other student groups, but the assignments you turn in should be entirely your team's own, unique work.

The use of AI technologies (like ChatGPT) is generally acceptable in this course but, like any other source, must always be attributed in a manner that can be reproduced by the reader. Moreover, such writing aids may be used in different ways at different stages of the creative process. Therefore if you use any of these systems to support your work where assignments specifically allow it, you will be required to describe the uses and process. Remember, when using generative AI technologies as a source of information, you are responsible for assessing the quality, completeness, and accuracy of the cited information.

Grading   Grades for the course will be determined using the following weightings:

Item	Weight
Individual Quiz	10%
Group Projects (3 at 15% each)	45%
Final Exam	35%
Professional Behavior	10%

Letter grades will be assigned based on your weighted average in the course. I *generally* use the following scale for assigning letter grades in this course:

Range	Grade	Range	Grade
95.0 or above	A	77.0 79.9	C+
90.0 94.9	A-	73.0 76.9	C
87.0 89.9	B+	70.0 72.9	C-
83.0 86.9	B	69.9 or below	F
80.0 82.9	B-		

Individual Quiz   Following our second week of this course, you will complete a quiz to assess your comprehension of Artificial Intelligence and Automation foundational elements as described through lectures, case studies, and readings.

The quiz will be fully online (via Canvas) and will consist of multiple choice questions. The quiz will be taken outside of class time and will be a closed book, closed notes, individual assignment (i.e., no resources can be used to complete the quiz).

Group Projects   You will be assigned groups following the first week of class. Group case analyses will be your opportunity to demonstrate your comprehension of key concepts introduced in this class. Be careful to follow the specific instructions for the content, formatting, and submission of each assignment. You are expected to turn assignments in on time.

All projects are due by 5PM on the indicated date. This deadline is set with great intention. I want you to have dinner. I want you to sleep. I don't want this class to interfere with your wellbeing. A 5PM deadline means you complete your assignment and get on with your life.

Assignments turned in after the deadline but on the same day that they were due will be assessed a 25% penalty. Assignments turned in within one week of the due date/time will be assessed a 50% penalty. No assignments will be accepted more than one week after the deadline.

Note on Team Work: You are expected to work with the same team on all team-based assignments. The ability to work effectively as a member of a team is critical in today's marketplace. Hence, at the end of the module, I will ask you to submit a team peer evaluation form (see template at the end of the syllabus).

Exam

The final exam will be held during the final exam week. It will be composed of short answer questions. The final exam will be cumulative, closed book, closed notes, individual assignment. You will be allowed to bring one (8.5 x 11) "cheat sheet" to the final exam with notes (written or typed).

No makeup exam or substitute assignment will be given for an unexcused absence. Excused absences require (e.g., the submission of a doctor's note for an illness or a note from a university authority documenting participation in another university-sponsored activity).

Professional Behavior

This course's material is best learned through active participation and informed debate in class. You are hence expected to come prepared for each class meeting and actively contribute to class discussions. Class involvement will be assessed based on my judgment, but you can expect to receive the following grades for your class involvement:

▪ 90-100% Almost always is well-prepared and has something relevant to say.

▪ 80-89% Adequately prepared and contributes during at least half of the class sessions.

▪ 70-79% Adequately prepared but seldom volunteers to speak.

▪ Below 70% Inadequately prepared.

Negative in-class behavior (lateness, inappropriate behavior, chatting, leaving class unexpectedly, texting, inappropriate use of electronic devices, etc.) will have a negative impact on your professionalism score. Also, note that personal computers are allowed in class with the understanding that they are used for class productivity (e.g., note taking, fact checking, concept clarification). All other electronic devices should be turned off during class, as they would if you were in an important business meeting.

Accessibility

It is important to me that you are set up for success in this course and your academic career. I will do everything I can to create an accessible classroom experience for every student.

It is the policy and practice of the University to provide reasonable accommodations for students with properly documented disabilities. Students who have, or think they may have, a disability are encouraged to contact Sara Bea Accessibility Services for a confidential discussion by emailing sarabeacenter@nd.edu or by phone at 574-631-7157.

Because the University's Academic Accommodations Processes generally require students to request accommodations well in advance of when they are needed, students who believe they may need an accommodation for this course are encouraged to contact Sara Bea Accessibility Services at their earliest opportunity.

Tentative Course Schedule

Date	Topics	Reading
Jan 16 (Week 1-1)	**Foundations of AI in Marketing** • Introduction to AI: Defining terminologies and concepts • Overview to Machine Learning and Data Science in marketing • Role of AI in Modern Marketing: Why it matters today and tomorrow	• Hartman: "AI FAQ" (LinkedIn 2023) • Mustak, Salminen, Pléc, Wirtz: "Artificial Intelligence in Marketing: Topic Modeling, Scientometric Analysis, and Research Agenda" (Journal of Business Research 2021)
Jan 18 (Week 1-2)	**Case Study Discussion** • IBM Watson: The Role of Cognitive Computing in Modern Marketing	• IBM Watson Case Study
Jan 23 (Week 2-1)	**Foundations of Automation in Marketing** • Introduction to Automation: Defining terminologies and concepts • Overview of automating marketing tasks and processes • Future of process improvements with emerging automation technologies	• Klaus Wertenbroch: "Marketing Automation: Marketing Utopia or Marketing Dystopia?" (NIM Marketing Intelligence Review, Vol. 13, No. 1, 2021)
Jan 25 (Week 2-2)	**Case Study Discussion** • Adobe Sensei: AI-powered Content Creation	• Adobe Sensei Case Study
Individual Quiz Online, multiple choice quiz covering the foundational elements of Artificial Intelligence and Automation discussed in lectures, case studies, and class readings. **(Must be completed by 1/29 at 5:00pm)**		
Jan 30 (Week 3-1)	**Understanding Predictive Analytics** • Significance of AI in forecasting consumer behavior • Introduction to Machine Learning algorithms for predictive insights	• Etechsocial: "AI-Driven Predictive Analytics: Transforming the Landscape of Business Intelligence" (Medium 2023)
Feb 1 (Week 3-2)	**Case Study Discussion** • Starbucks: Using Predictive Analytics to Optimize Product Launches	• Starbucks Case Study

Date	Topics	Reading
Feb 6 (Week 4-1)	**Predictive Analytics in Marketing** ・ Predictive Analytics in campaign optimization, ROI estimation, and content marketing ・ Predictive analytics for SEO and email campaigns	・ De Cremer, Kasparov: "AI Should Augment Human Intelligence, Not Replace It" (Harvard Business Review, 2021)
Feb 8 (Week 4-2)	**Case Study Discussion** ・ Zara: Harnessing Predictive Analytics for Fast Fashion	・ Zara Case Study
Feb 13 (Week 5-1)	**Ethical Implications of Predictive Analytics** ・ Advanced predictive techniques and tools and the fear of "knowing too much" ・ Ethical implications and considerations in predictive analytics	・ Wertenbroch et al.: "Autonomy in Consumer Choice" (Marketing Letters 2020)
Feb 15 (Week 5-2)	**Case Study Discussion** ・ X (Twitter): Using Predictive Analytics to Boost User Engagement	・ X (Twitter) Case Study
Predictive Analytics Group Project As a team, you will consider a novel AI-driven predictive analytics solution and present how to best design the solution to maximize benefits to the marketer and minimize drawbacks for the user. More information will be provided during class. **(Due 2/28 at 5:00pm EST)**		
Feb 20 (Week 6-1)	**Basics of AI-driven Personalization** ・ Understanding Data-Driven Marketing: Segmentation, Targeting, and Positioning (STP) using AI ・ Mechanics of recommendation engines	・ Lin: "AI-Based Marketing Personalization: How Machines Analyze Your Audience" (Marketing AI Institute 2022)
Feb 22 (Week 6-2)	**Case Study Discussion** ・ Netflix: The Algorithm Behind User Recommendations	・ Netflix Case Study
Feb 27 (Week 7-1)	**Personalization in Digital Marketing** ・ How AI interprets user data for better ad targeting ・ Multi-dimensional Personalization: Content, Pricing, and Platform	・ Harkness, Robinson, Stein, Wu: "How generative AI can boost consumer marketing" (McKinsey & Company 2023)
Feb 29 (Week 7-2)	**Case Study Discussion** ・ Amazon: Enhancing Shopping Experiences Through Personalization	・ Amazon Case Study

Date	Topics	Reading
Grow Irish Week (Mar 4 - 8)		
Spring Break (Mar 11 - Mar 15)		
Mar 19 (Week 8-1)	**Ethical Considerations of Personalization** · Personalizing chatbot interactions and conversational marketing · Ethical concerns in data collection and personalization	· Puntoni, Reczek, Giesler, Botti: "Consumers and Artificial Intelligence: An Experiential Perspective" (Journal of Marketing 2021)
Mar 21 (Week 8-2)	**Case Study Discussion** · Spotify: Dynamic Playlists and User Data	· Spotify Case Study
Personalization Group Project As a team, you will consider a novel AI-driven personalization solution and present how to best design the solution to maximize benefits to the marketer and minimize drawbacks for its consumers. More information will be provided during class. **(Due 4/3 at 5:00pm EST)**		
Mar 26 (Week 9-1)	**AI in Customer Service and Sales** · Chatbots, Voice Assistants, and improving efficiency · AI in sales forecasting and Customer Relationship Management (CRM)	· Meyers: "Everything You Need to Know About AI in Customer Service" (Salesforce 2023)
Mar 28 (Week 9-2)	**Case Study Discussion** · Salesforce: Revolutionizing Customer Service	· Salesforce Case Study
Apr 2 (Week 10-1)	**AI Tools for Process Improvement** · Overview of advanced AI tools and approaches impacting business processes today · Voice Search, Visual Recognition, and their marketing applications	· Davenport, Holweg, Jeavons: "How AI Is Helping Companies Redesign Processes" (HBR 2023)
Apr 4 (Week 10-2)	**Case Study Discussion** · Sephora: Visual Recognition for Enhanced Shopping Experiences	· Sephora Case Study
Apr 9 (Week 11-1)	**Ethical Implications of AI Processes** · Addressing AI's "black box" challenge · Balancing efficiency with socio-economic impacts · Navigating risks of over-reliance on AI	· Granulo, Fuchs, Puntoni: "Preference for Human (vs. Robotic) Labor is Stronger in Symbolic Consumption Contexts" (Journal of Consumer Psychology 2021)
Apr 11 (Week 11-2)	**Case Study Discussion** · Microsoft: Lessons Learned From The Failed X (Twitter) Chatbot "Tay"	· Microsoft Case Study

Date	Topics	Reading
Process Improvement Group Project As a team, you will consider a novel AI-driven process improvement solution and present how to best design the solution to maximize benefits to the marketer and minimize downsides for the organization. More information will be provided during class. **(Due 4/24 at 5:00pm EST)**		
Apr 16 (Week 12-1)	**Integrating AI into Marketing Strategies** ▪ Best Practices for implementing AI in marketing campaigns and strategies ▪ Challenges in AI integration and overcoming them	▪ Deloitte Digital: "5 questions to ask when integrating generative AI into your marketing strategy" (2023)
Apr 18 (Week 12-2)	**Case Study Discussion** ▪ Google: Navigating the New Frontier of AI-Integrated Marketing	▪ Google Case Study
Apr 23 (Week 13-1)	**Potential Impact of Next-Gen AI Tech** ▪ Exploring upcoming AI technologies and their marketing implications ▪ Staying Ahead in AI: Preparing for the future and continuous adaptation	▪ Durth, Hancock, Maor, Sukharevsky: "The organization of the future: Enabled by gen AI, driven by people" (McKinsey & Company 2023)
Apr 25 (Week 13-2)	**Case Study Discussion** ▪ Tesla: Revolutionizing the Road with AI and Visionary Marketing	▪ Tesla Case Study
Apr 30 (Week 14-1)	**Course Review** ▪ Review course material in preparation for Final Exam	▪ None
Final Exam Week TBD		

Team Peer Eval Form

The ability to work effectively as a member of a team is critical in today's marketplace. Recognizing the importance of effective team dynamics, I place a strong emphasis on not only your individual contributions but also on your ability to work cohesively with others.

To this end, I am requesting that you engage in a thoughtful and honest appraisal of your team's dynamics and the individual contributions made by each member. This involves a critical evaluation where you are required to allocate a total of 100 points among yourself and your team members. The distribution of these points should reflect the relative quality and effort put forth by each individual in your group projects.

Please note that this evaluation is due at the end of the course and will be used to adjust course grades if necessary. You can complete and hand in this form (i.e., detach it from the syllabus) or send me a scanned copy via email. **If you do not submit this form, I will assume that everyone in your team contributed equally to the team-based assignments.**

Automation and AI in Marketing Team Evaluation
Allocation of Contribution must total to 100 points

Contribution

Your Name:

_____   _____

Your Team:

_____   _____

_____   _____

_____   _____

_____   _____

= 100

Please briefly explain your evaluation:

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