<center>**MAR6669 - Marketing Analytics II**</center>

Professor:	Dr. Mingzhang Yin
Office:	Stuzin 260
Telephone:	206-519-8518
Email:	mingzhang.yin@warrington.ufl.edu
Office Hours:	Wednesdays – 08:00 a.m. to 10:00 a.m.
	Appointments available outside those hours (schedule by email)
Term:	Spring 2023 – Module 4, 2/28/2023 through 4/26/2023
	Tuesday / Thursday 11:45 a.m. to 1:40 p.m.
Section:	Class 30166-0837 – Stuzin Hall – Room 101

Course Description

This course is designed to engage you in the analytics activities that support marketing decision-making. In the course, you will complete all of the steps in an analytics process, including:

1) Understanding the business functional purpose behind the marketing analytics problems to be solved
2) Identifying the data sources and types of data and that are available to solve specific marketing problems
3) Executing the key efforts to prepare marketing data for analytics processes
4) Deciding which kinds of analytics models work best to solve specific marketing problems
5) Utilizing those analytics models and data to create analytics outputs that answer the marketing decision-making needs.
6) Evaluating the outputs of an analytics model and deciding whether the model needs to be modified
7) Developing briefings for decision-makers that "make digestible" the results of a marketing analytics analysis in clear, non-jargon-based language

Course Objectives

The ultimate objective at the end of the course would be for you to be confident being part of a marketing analytics team or to interpret the results of a marketing analytics analysis and make a decision for your firm. To prepare you to act in one of these roles, you will be exposed to and participate in the key processes that are used commercially to perform and explain marketing analytic efforts. Specific objectives of the course are:

1) Understand the most commonly used analytics methodology process.
2) Describe key analytics efforts that support marketing decisions.
3) Develop an analytics problem statement for a marketing analytics team to follow.
4) Identify potential sources of data to support marketing analytics efforts.
5) Conduct key data preparation steps to prepare data to be used in marketing models and analytics processes.
6) Perform a subset of marketing analytics modeling efforts in the R statistics program.
7) Describe the effectiveness of the marketing analytics model outputs.
8) Develop briefings or data visualizations of the marketing analytics models for C-suite decision-makers that minimize analytics jargon.

Course Prerequisites

It is **NOT required** that students take Marketing Analytics I prior to taking Marketing Analytics 2. The two courses cover different Marketing Analytics models and techniques. A key prerequisite for this course is a basic understanding of the statistical programming language R. It is expected that students will have completed one of the following:

- QMB6930 – Business Analytics Processes for Business – R Bootcamp
- ISM6405 Introduction to Business Intelligence
- An online introductory course in R, such as those offered by Coursera, Udemy, DataCamp, or an equivalent
- Significant self-taught preparation in R utilizing an introductory text or similar web-based tutorial

If you would like to have the prerequisite met by an online Introduction to R programming course, instructor permission is required before being admitted to the course.

A second key prerequisite is an adequate background in math and statistics appropriate for the topic. Although this course will focus on business applications of the statistical tools for marketing analytics, students are expected to have some mathematical and statistical backgrounds to effectively utilize the statistical tools. Basic statistical and probability courses are essential.

The third prerequisite is an adequate laptop capable of operating the statistical programming scripting language *R*. In addition to R, the class will utilize the Integrated Development Environment (IDE) for *R* – RStudio. Both *R* and RStudio are open source software capable of operating on Windows-based and Apple-based operating systems.

UF CANVAS Course Delivery

This course will be taught in a live classroom format. Sessions may be recorded and made available asynchronously via a Zoom link for students who may miss class due to interviews or COVID-19 restrictions. The recordings of our class sessions will normally be posted by the day following our sessions.

The course contains several hands-on exercises. The exercises are designed to develop capabilities that you can use in your daily business life. PDF files of the class presentations will also be provided via Canvas. They are provided to allow you to follow along with your own version of the example data and R script files which can be downloaded from Canvas.

Electronic video or audio recording of class lectures:

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To "publish" means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third-party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Should all or part of this class be offered via an online mechanism during this semester, our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live.

Special COVID-19 Important Instructions for In-Person Attendance

While we hope that COVID-19 will not impact our class, it continues to be a threat to the health and well-being of students and faculty at UF. In response to COVID-19, the following practices are in place to maintain your learning environment, to enhance the safety of our in-classroom interactions, and to further the health and safety of ourselves, our neighbors, and our loved ones.

- Current guidance from the UF related to COVID-19 can be found at the following link - https://coronavirus.ufl.edu/health-guidance/. The guidance as of 2/9/2022 includes the expectation that you wear approved face coverings at all times during class and within buildings

even if you are vaccinated. Hopefully, COVID-19 will become less of a factor over time and the University will be able to change these recommendations (following CDC guidance).

- If you are not vaccinated, please get vaccinated. Vaccines are readily available at no cost and have been demonstrated to be safe and effective against the COVID-19 virus. Our UF Health experts tell us that even if you've had COVID-19, you still need to get vaccinated. Having had COVID does not provide nearly as much protection as the vaccine. Visit this link for details on where to get your shot, including options that do not require an appointment: https://coronavirus.ufhealth.org/vaccinations/vaccine-availability/.
- COVID-19 testing remains available both on and off campus. Visit the UF Health site for additional information.
- If you are sick, stay home and self-quarantine. Please visit ONE.UF to complete a short screening questionnaire to determine if you have symptoms consistent with COVID-19 or had a recent exposure to a positive case. After completing the questionnaire, you'll have the option of scheduling a test.
- Please continue to follow healthy habits, including best practices like frequent hand washing.
- Continue to regularly visit coronavirus.ufhealth.org and coronavirus.ufl.edu for up-to-date information about COVID-19 and vaccination.

Weekly Course Schedule of Topics and Assignments

Holidays – Spring Break – Week of March 7-11

Week	Class	Date	Topics	Assignments
1	Session 1	Mar 1st	Analytics Process & Marketing Applications	• Reading: Class Notes on Canvas • Assignment: **Finding and reporting on a Marketing Analytics Technique (i)**
1	Session 2	Mar 3rd	Building effective data visualizations for marketing applications	• Reading: Class Notes on Canvas • Assignment: **Comparing groups (i)**
2	Spring Break	Mar 8th	No class	
2	Spring Break	Mar 10th	No class	
3	Session 3	Mar 15th	Collecting data from the web – Web Scraping	• Reading: Class Notes on Canvas • Assignment: **Extracting Data from the Web using R (i)**
3	Session 4	Mar 17th	Natural Language Processing (NLP) & Sentiment Analysis	• Reading: Class Notes on Canvas • Assignment: **Calculating Sentiment using Social Media Data (i)**
4	Session 5	Mar 22nd	Survey Analysis	• Reading: Class Notes on Canvas • Assignment: **Visualizing Survey Data (i)**
4	Session 6	Mar 24th	A/B Testing & Marketing Metrics	• Reading: Class Notes on Canvas • Assignment: **Performing an A/B Testing Analysis (i)**

5	Session 7	Mar 29th	Midterm Exam	• In Class Midterm Exam
5	Session 8	Mar 31st	Customer Profile	• Reading: Class Notes on Canvas Assignment: **Using k-means clusters to create customer personas** (i)
6	Session 9	Apr 5th	Multi-Dimensional Scaling	• Reading: Class Notes on Canvas Assignment: **Competitor Analysis (i)**
6	Session 10	Apr 7th	Predicting Customer Behavior	• Reading: Class Notes on Canvas Assignment: **Interpreting a customer prediction model (i)**
7	Session 11	Apr 12th	Recommendation Engines	• Reading: Class Notes on Canvas Assignment: **Quiz on Canvas about Recommendation Engines (i)**
7	Session 12	Apr 14th	Reducing Churn	• Reading: Class Notes on Canvas Assignment: **Identifying customers likely to leave** (i)
8	Session 13	Apr 19th	Likelihood to buy or engage	• Reading: Class Notes on Canvas • Assignment: None • Final Exam Review
9	Session 14	Apr 26th	Final Exam	• Assignment: **Final Exam (i)**

Legend: (i) = individual assignment; (t) = team assignment

Evaluation and Grading Criteria

The current grading plan is listed below. Class participation is inclusive of both attendance as well as providing meaningful discussion during class. There is a total of 370 points currently planned during the course. The breakout of the points by assignment follows:

Graded Activity	Effort	Points per Assignment
Finding and reporting on a Marketing Analytics Technique	Individual	20
Comparing Groups	Individual	20
Extracting Data from the Web using R	Individual	20
Calculating Sentiment using Social Media Data	Individual	20
Visualizing Survey Data	Individual	15
Midterm Exam	Individual	75
Using K-means clusters to create customer personas	Individual	20
Competitor Analysis	Individual	20
Interpreting a Customer Prediction Model	Individual	20
Quiz on Canvas about Recommendation Engines	Individual	20
Identifying customers likely to leave	Individual	20
Final exam	Individual	100
Total Points		370

Marketing Analytics II – MAR6669
Dr. Mingzhang Yin– Spring 2023

Criteria for grading activities will be provided on Canvas along with specific directions for completing the activity.

Late or Missed Assignments

Late or missed assignments may not receive full point credit or may be assigned 0 points. Contact me if you know in advance that you will be late with an assignment or will miss an assignment (typically due to an excused absence). Acceptable notification and my concurrence with the reasons for the late or missing assignment will receive more favorable treatment than notification after an assignment is due.

If you have technical issues that prevent you from submitting assignments on schedule, please ensure that you contact the TAC Student Information Technology Support Center to document your problem and help resolve the issue. Information on how to contact Student Support can be found at: https://warrington.ufl.edu/information-technology-support-programs/technical-services/tac-student-support/

Grading Scale and Grading Policies for Assigning Grade Points

The grading scale will be as follows:

Grade	Grade Point Average	Score (in percent)
A	4.00	95.0 or above
A-	3.67	90.0-94.99
B+	3.33	87.0-89.99
B	3.00	84.0-86.99
B-	2.67	80.0-83.99
C+	2.33	77.0-79.99
C	2.00	74.0-76.99
C-	1.67	70.0-73.99
D+	1.33	67.0-69.99
D	1.00	64.0-66.99
D-	0.67	60.0-63.99
E	0.00	Less than 60.0

I reserve the right to adjust the grading scale, if necessary, to achieve a proper distribution of performance among the class. You can find information about the UF grading policies in the Graduate Student Handbook at:
http://www.graduateschool.ufl.edu/media/graduate-school/pdf-files/handbook.pdf.

Additional information about the University of Florida's Graduate School Grading Policies are further explained at the following link:
https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/.

Required and Recommended Textbooks, Readings, and Class Notes

Textbooks – There are **no required texts** for this course. There are three **recommended texts** associated with this course. The **recommended texts** are:
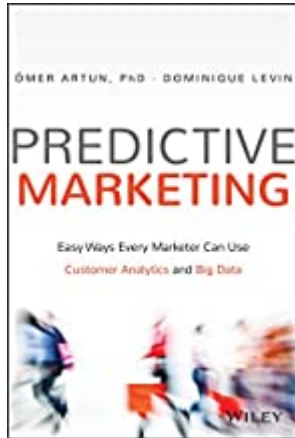
Artun, O. and Levin, D. (2015). *Predictive Marketing: Easy Ways Every Marketer Can Use Customer Analytics and Big Data*. Hoboken, New Jersey: John Wiley & Sons

This book is available on Amazon.com. The approximate cost should be approximately $25 - $30.
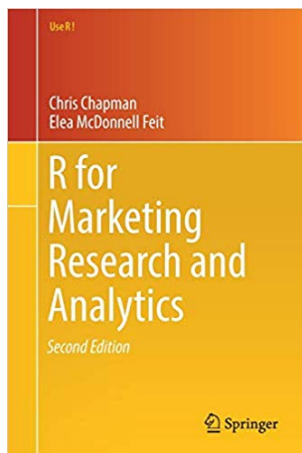
Chapman, C. and Feit, E. (2019). *R for Marketing Research and Analytics*. Switzerland AG: Springer Nature

This book is available on Amazon.com. The approximate cost should be between $57 - $68.
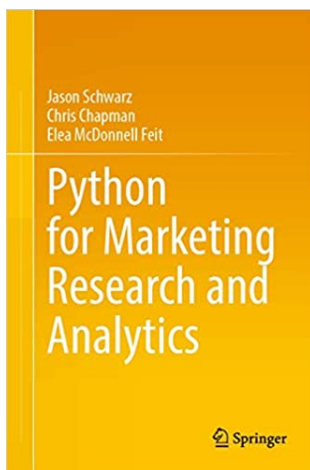
Schwarz, J. Chapman, C. and Feit, E. (2020). *Python for Marketing Research and Analytics*. Switzerland AG: Springer Nature

This book is available on Amazon.com. The approximate cost should be between $50.

Class Notes, R-code, and Data – Class notes, R-code and datasets for this course will be available in Canvas - https://ufl.instructure.com.

Attendance, Make-up Exams, and Other Work

Students are responsible for satisfying all academic objectives as defined by the professor. Absences count beginning with the first class meeting and are incorporated into the participation grade. Additionally, you will be evaluated based on your contribution to your team. Attendance at team meetings is important as well. This will be assessed by each of your teammates as part of the final presentation report submission.

In general, acceptable reasons for absence from or failure to participate in class include illness, serious family emergencies, special curricular requirements (e.g., judging trips, field trips, professional conferences), military obligation, severe weather conditions, religious holidays, and participation in official university activities such as music performances, athletic competition or debate. Absences from class for court-imposed legal obligations (e.g., jury duty or subpoena) must be excused. Other reasons also may be approved.

Students shall be permitted a reasonable amount of time to make up the material or activities covered in their absence.

Students cannot participate in the class unless they are registered officially or approved to audit with evidence of having paid audit fees. The Office of the University Registrar provides official class rolls to instructors.

Students in this class must participate in at least one of the first two class meetings, or risk being dropped from the course. If you cannot attend at least one those initial classes, please contact me using the contact information at the top of the Syllabus. If you are dropped from this course, the department will notify you.

Attendance in important to understanding the concepts taught in the class. Missing a class also means that the associated assignments will potentially be affected. I highly encourage attendance.

Accommodations for Students with Disabilities

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting https://disability.ufl.edu/students/get-started/. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the module.

Online Course Evaluation Process

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they

receive from GatorEvals, in their Canvas course menu under GatorEvals, or via
https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at
https://gatorevals.aa.ufl.edu/public-results/.

Honor Code Reminder

UF students are bound by The Honor Pledge which states, "We, the members of the
University of Florida community, pledge to hold ourselves and our peers to the highest
standards of honor and integrity by abiding by the Honor Code. On all work submitted for
credit by students at the University of Florida, the following pledge is either required or
implied: "On my honor, I have neither given nor received unauthorized aid in doing this
assignment." The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honorcode/)
specifies several behaviors that are in violation of this code and the possible
sanctions. Furthermore, you are obligated to report any condition that facilitates academic
misconduct to appropriate personnel. If you have any questions or concerns, please consult
with the instructor or TAs in this class."

Class Demeanor Expectations

You are in a graduate program and soon to enter the business workforce. In the business workforce
environment, you will have to make choices based on the norms for that work environment related to
the use of your cell phones and using laptops in business meetings. To practice how you will probably
need to operate in that environment, I request that cell phone ringers be silenced during class and that
laptop speakers be set to silent. Exercise professional decision-making about how you use your
electronic devices while in class.

If you are late to class or need to leave class for appointments or emergencies, please be respectful of
your fellow students and the professor. Be as quiet as possible when leaving or entering.

Campus Resources

Health and Wellness

U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-
392-1575, or visit U Matter, We Care website to refer or report a concern and a team member will
reach out to the student in distress.

Counseling and Wellness Center: Visit the Counseling and Wellness Center website or call 352-
392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you
need, or visit the Student Health Care Center website.

University Police Department: Visit UF Police Department website or call 352-392-
1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-

0111 or go to the emergency room at 1515 SW Archer Road,
Gainesville, FL 32608; Visit the UF Health Emergency Room and Trauma Center website.
Academic Resources

E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at helpdesk@ufl.edu.

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

Student Complaints On-Campus: Visit the Student Honor Code and Student Conduct Code webpage for more information.

On-Line Students Complaints: View the Distance Learning Student Complaint Process

Assurance of Learning

The University of Florida MBA program participates in the Association to Advance Collegiate Schools of Business (AACSB) approach to Assurance of Learning (AOL) objectives. The MAR6930 course is aligned to the AOL goals and objectives below:

Goal 1: Demonstrate competency across areas of marketing.
  1A. Objective: Demonstrate significant knowledge and understanding of concepts, methods, and tools in marketing.

Goal 2: Apply appropriate problem solving, decision-making, and analytical skills.
  2A. Objective: Apply essential marketing principles to analyze and evaluate problems in marketing, and to construct and implement appropriate solutions.
  2B. Objective: Apply critical reasoning and analytical processes to evaluate evidence and generate creative alternatives in the service of decision making.

Goal 3: Develop effective communication skills.
  3A. Write business documents clearly, concisely, and analytically.
  3B. Apply critical reasoning and analytical processes to evaluate evidence and generate creative alternatives in the service of decision making

Goal 4: Develop effective communication skills.
  4A. Write business documents clearly, concisely, and analytically
  4B. Speak in groups and in public clearly, concisely, and analytically, with appropriate use of visual aids.