BUSA 423: Business Analytics Programming

Summer, 2024

Instructor: Dr. Vinayaka Gude
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Location: 2066, 8750 NorthPark Central

Office Hours: Thursday 9 -11:30 AM (or by appointment).

COURSE INFORMATION

Course Modality: Online

COVID-19 Related

A&M-Commerce requires the use of face-coverings in all instructional and research classrooms/laboratories. Exceptions may be made by faculty where warranted. Faculty have management over their classrooms. Students not using face-coverings can be required to leave class. Repetitive refusal to comply can be reported to the Office of Students' Rights and Responsibilities as a violation of the student Code of Conduct.

Students should not attend class when ill or after exposure to anyone with a communicable illness. Communicate such instances directly with your instructor. Faculty will work to support the student getting access to missed content or completing missed assignments.

Recommended Textbooks

Automate the Boring Stuff with Python by Al Al Sweigart (Available at: https://automatetheboringstuff.com/)
A Byte of Python
(Available at: https://python.swaroopch.com/**)**

COURSE DESCRIPTION

This course is aimed at developing practical machine learning and data science skills which are quintessential for future professionals in the field of analytics. The course will cover theoretical concepts of a broad range of machine learning and deep learning concepts and methods. The tutorials, assignments and projects provide students with practical knowledge to solve real world problems.

COURSE OBJECTIVES

By the end of this course, students will be able to:

- Identify, interpret, and apply core programming building blocks in Python code.
- Use algorithmic thinking to break up problems into smaller pieces and solve each piece individually.
- Recognize and apply the best industry practices for programming.
- Interpret, use, and build on existing code and Python libraries.

GRADING

Assignments

There is an assignment due every week on the topics discussed in the class.

Final Grade

At the end of this semester, if your total is between 90 and 100, you will get an A; if it's between 80 and 89, you will get a B, and so on. No curving will be used in this class.

Tasks	% of the final grade
Assignments	60
Final Exam	30
Quizzes	10

Points	Grade
90-100	A
80-89	B
70-79	C
60-69	D
Below 60	F

COB SLO-Course Objective Alignment

COB STUDENT LEARNING OUTCOMES (SLOS)	COURSE OUTCOMES - AFTER SUCCESSFULLY COMPLETING THIS COURSE, STUDENTS WILL BE ABLE TO:	MEASUREMENT METHODS (OUTCOME ASSESSMENTS)
3,5	- Identify, interpret, and apply core programming building blocks in Python code. - Use algorithmic thinking to break up problems into smaller pieces and solve each piece individually. - Recognize and apply the best industry practices for programming. - Interpret, use, and build on existing code and Python libraries.	Assignments & Quizzes

TECHNOLOGY REQUIREMENTS

You will need to use Anaconda distribution to run the python programs.

COMMUNICATION AND SUPPORT

If you ask me questions by email, I will reply within 48 hours. However, I usually answer them much faster.

If you have questions about software operations, please make sure to include the screenshots of the issues in the emails.

All assignment due dates, deadlines, and exam time are central time in the United States.

COURSE AND UNIVERSITY POLICIES

Students with Disabilities

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides reasonable accommodation of their disabilities.

If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Gee Library- Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamuc.edu

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See *Code of Student Conduct from Student Guide Handbook).*

Campus Concealed Carry

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to the linked document below. http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M- Commerce campuses. Report

violations to the University Police Department at 903-886- 5868 or 9-1-1.

AI USE POLICY

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism). Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty
13.99.99.R0.10 Graduate Student Academic Dishonesty

TENTATIVE COURSE OUTLINE

Week	Topic	Deliverables
1	Introduction and software installation Loops & Datatypes	Assignment 1
2	Classes & Functions Data Structures & Exceptions	Assignment 2
3	Data Visualization Analytics in python	Assignment 3
4	Machine Learning Advanced Applications	Assignment 4