

ECO 395m: Data Science Practicum

Unique Number: 34215

Course Website: https://github.com/edkrueger/eco395m-practicum

Class:

Class will meet Tuesday and Thursday 2:00pm - 3:30pm CT.

Class will be held in person in BRB 2.136.

Instructor: Edward Krueger

• Email: edwardkrueger@utexas.edu

• Office Hours: Tuesdays and Thursdays 5:00pm - 5:45pm CT

Office Hours Location: BRB 1.118

Course Description and Requirements

Course Description

The Data Science Practicum offers a practical immersion into the realm of data science through engagement in real-world projects provided by industry partners. Collaborating in teams, you will undertake substantial data-driven initiatives with established organizations, enriching your understanding of techniques such as data analysis, predictive modeling, machine learning, and data-driven decision-making.

Throughout the course, students will engage in weekly team update meetings, known as "standups," which will occur during class time. During these standups, students will meet with their teams and the instructor to discuss progress, challenges, and next steps. In addition to standups, students will also have less frequent touchpoint meetings with industry partners and myself. These meetings may or may not occur during class time. These interactions provide valuable opportunities for guidance, feedback, and alignment with the project's goals.

This course is rooted in experiential learning, emphasizing a hands-on approach to mastering the intricacies of data science practice.

Course Objectives

The Data Science Practicum, much like an internship, provides students a valuable opportunity to apply their data science knowledge to real-world contexts, mirroring the experience of addressing practical challenges akin to those encountered in a professional environment.

Although important parts of the learning process take place during scheduled class time standups and meetings, the majority of the coursework and learning occurs beyond the classroom setting. This includes engagement in team discussions, interactions, and consultations with the instructor and industry partners.

The course aims to assist students in achieving the following objectives:

- Acquire advanced insights into data science by applying theoretical concepts to real-world situations.
- Develop proficiency in the role of a data science consultant, gaining firsthand experience in collaborative problem-solving within a team to address datarelated challenges.
- Create relevant data science-related accomplishments that you can add to your resumes and discuss in interviews.
- Enhance portfolios with hands-on experience and practical projects showcasing

data science expertise.

Foster the development of insights and networking connections that can have a
positive impact on one's professional journey.

Course Policies

Confidentiality

Depending on the partner company that students are assigned to, they may or may not, need to enter into a Non-Disclosure Agreement (NDA) with the partner company.

If you are assigned to a partner company that requires an NDA, you must enter into it by the end of the first week of class. Failure to do so will make it impossible to complete your assigned project and you will receive a grade of F for the class if you continue to be enrolled.

However, *all* information provided by a partner company is to be treated as confidential and used only for project-related purposes. Treat your partner company's data, strategy, and conversations as confidential. Do not reveal any information without express permission from your partner company.

In the unlikely event that a breach of confidentiality occurs, it may impact your course grade at the discretion of the instructor with input from the partner company.

Team Expectations

In addition to the requirements of the course, your team should set expectations with its members.

Some examples include:

- Responding to correspondence from team members within 24 hours
- Updating members when tasks are completed or stalled on Discord and/or GitHub, etc.
- Joining or arriving at internal team meetings within 5 minutes of the agreed start times.
- Posting progress, or lack thereof, daily or on alternate days to Discord.

Attendance and Standup

Each week your team will have a 30-minute standup with me during class time on Tuesdays. The timing and day of the standup may fluctuate based on constraints such as meeting with industry partners.

You are expected to attend every class standup for your team, however, you will be allotted 1 absence from standup without the need to explain it. However, you should notify your team and your instructor. Unless a prior agreement is made with both the team and your instructor, any further absences from standup will result in a loss of 10% of your final course grade each.

On Thursdays, each team meber will report thier progress on Discord.

Grading

Grades will be based on:

- Midterm Deliverable/Presentation (40%)
- Final Deliverable/Presentation (60%)

Final grades will be determined on the basis of the following rubric.

Please note: to ensure fairness, all numbers are absolute, and will not be rounded up or down at any stage. Thus a B- will be inclusive of all scores of 80.000 through 83.999. A = 94-100 A = 90-93 B + = 87-89 B = 84-86 B - = 80-83 C + = 77-79 C = 74-76 C - = 70-73 D + = 67-69 D = 64-66 D - = 60-63 F = 0-60 C.

Grades will be *not* be curved. Please do not ask me about extra credit or extra work to improve your grade. None will be given.

Deliverables and Presentations

Different projects from different industry partners will have different goals and deliverables so cannot be evaluated on a common rubric. Grades will be assigned based on my discretion with feedback from industry partners.

Some examples of evaluation criteria I find important see these project rubrics from my other course:

- https://github.com/edkrueger/eco395m/blob/main/projects/midterm-project.md
- https://github.com/edkrueger/eco395m/blob/main/projects/final-project.md

Industry partners may also include some evaluation criteria relating to particular projects.

University Disclosures and Policies

Statement on Academic Integrity and Conduct

The University of Texas Honor Code states:

The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the university is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

Each student in this course is expected to abide by the UT Honor Code and uphold academic integrity.

What this means for this course:

For group projects, the Honor Code means that the work you represent as your contributions must be your own, that confidentiality of materials (including those on GitHub) is respected, and that standards of professionalism are maintained.

Sharing of Course Materials is Prohibited

No materials used in this class, including, but not limited to, lecture hand-outs, assessments (homework assignments), in-class materials, and review sheets, may be shared online or with anyone outside of the class - or in future classes - unless you have my explicit, written permission. Unauthorized sharing of materials promotes cheating. It is a violation of the University's Student Honor Code and an act of academic dishonesty. I am well aware of the sites used for sharing materials, and any materials found online that are associated with you, or any suspected unauthorized sharing of materials, will be reported to Student Conduct and Academic Integrity in the Office of the Dean of Students. These reports can result in sanctions, including failure in the course.

Class Recordings:

Class recordings are reserved only for students in this class for educational purposes and are protected under FERPA. The recordings should not be shared outside the class in any form. Violation of this restriction by a student could lead to Student Misconduct proceedings.

ADA Notice

I am committed to creating an accessible and inclusive learning environment consistent with university policy and federal and state law. Please let me know if you experience any barriers to learning so I can work with you to ensure you have equal opportunity to participate fully in this course. If you are a student with a disability, or think you may have a disability, you may request appropriate academic accommodations by contacting Services for Students with Disabilities (SSD) at http://diversity.utexas.edu/disability/.

Harassment Reporting Requirements

Under Texas Senate Bill 212 (SB 212), the professor and TAs for this course are required to report for further investigation any information concerning incidents of sexual harassment, sexual assault, dating violence, and stalking committed by or against a UT student or employee. Federal law and university policy also requires reporting incidents of sex- and gender-based discrimination and sexual misconduct (collectively known as Title IX incidents). This means we cannot keep confidential information about any such incidents that you share with us. If you need to talk with someone who can maintain confidentiality, please contact University Health Services at https://healthyhorns.utexas.edu/ or the UT Counseling and Mental Health Center at https://cmhc.utexas.edu/. You can also make an appointment with a confidential advocate by emailing advocate@austin.utexas.edu or calling (512) 232-2860. We strongly urge you to make use of these services for any needed support and to report any Title IX incidents to the Title IX Office.

Wellbeing Resources:

Grad school is hard. Take care of yourselves and others.

- The Counseling and Mental Health Center serves UT's diverse campus community by providing high quality, innovative and culturally informed mental health programs and services that enhance and support students' well-being, academic and life goals. To learn more about your counseling and mental health options, call CMHC at (512) 471-3515.
- Check out the Longhorn Wellness Center, and these self-care Virtual Mindfulness and Stress Reduction Activities.
- If you are experiencing a mental health crisis, call the CMHC Crisis Line 24/7 at (512) 471-2255.

 If you have concerns about the safety or behavior of fellow students, TAs or Professors, call BCCAL (the Behavior Concerns and COVID-19 Advice Line): 512-232-5050. Your call can be anonymous. If something doesn't feel right – it probably isn't. Trust your instincts and share your concerns.

Course Schedule

You will have at least 3 touchpoints with your industry partner including a kickoff call, a midterm check-in/presentation, and a final presentation. These will be scheduled according to the availability of your instructor, industry partners, and yourself. These may or may not occur during class time.

The scheduled class time will be devoted to standups and collaboration with your teammates and consultation with your instructor.

Based on demand, I may also include informal lectures and workshops on topics that facilitate successful projects.

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