

Practical Work in Applied Data Science

EGN 6933

Class Periods: varied

Location: TBD

Academic Term: Summer 2025

Instructor:

Varied

Graduate Coordinator:

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Academic Advisor:

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Course Description

Practical internship/co-op work in the field of applied data science in the student's selected specialization under industrial supervision. 0-3 credits, repeatable. (S/U grade)

Course Pre-Requisites / Co-Requisites

Pre-requisites:

- CAP 5771 Introduction to Data Science,
- EGN 6446 Mathematical Foundations for Data Science for Engineers II, and
- EEE 5776 Applied Machine Learning.

In addition to these pre-requisites, you must consult your program documentation and academic advisor for internship/training experience eligibility of the internship/co-op in the field of applied data science in the student's selected specialization. Approval from your program's Graduate Coordinator is required to enroll.

Course Objectives

This practical work aims to equip students with hands-on experience in applied data science under industrial supervision.

- Real-World Problem Solving: Develop skills in addressing and solving real-world data science problems through hands-on projects provided by industry partners.
- Data Handling and Analysis: Gain practical experience in data collection, cleaning, and preprocessing, applying statistical and machine learning techniques to analyze and interpret data effectively.
- Tool Proficiency: Apply industry-standard data science tools and technologies, such as Python, R, SQL, and relevant data visualization and machine learning libraries.
- Project Management: Learn to manage and execute data science projects from start to finish, including project planning, milestone tracking, and delivering results within a professional setting.
- Communication Skills: Develop the ability to present data-driven insights and recommendations clearly and effectively to both technical and non-technical stakeholders.
- Collaboration and Teamwork: Work collaboratively with industry professionals and peers to enhance teamwork skills and adapt to diverse working environments.
- Ethical and Professional Practices: Understand and apply ethical considerations and best practices in data science, ensuring the responsible and professional handling of data and results.
- Feedback Integration: Receive and incorporate feedback from industry supervisors to refine technical skills and improve project outcomes.

Materials and Supply Fees

None

Required Textbooks and Software

N/A

Recommended Materials

- IEEE Manuscript Templates for Conference Proceedings:
<https://www.ieee.org/conferences/publishing/templates.html>.
- Reis, Simone R. N., & Reis, Andre I. (2013, March). [How to write your first scientific paper](#). In *2013 3rd Interdisciplinary Engineering Design Education Conference* (pp. 181-186). IEEE.

Required Computer

UF student computing requirement: <https://news.it.ufl.edu/education/student-computing-requirements-for-uf/>

Course Schedule

The course schedule will depend on the specific internship/training experience. The typical time per topic will vary depending on the internship/co-op. The following list of steps must be completed in order:

1. Submit Faculty Mentor Name & Industry Supervisor Name,
2. Complete 2500 words (+/- 50 words) Reflection Paper,
3. Submit to Industry Supervisor and receive approval form,
4. Submit to Faculty Mentor and receive approval form,
5. Submit Industry Supervisor Evaluation Letter.

Important Dates

Milestone	Deadline
Internship/Co-Op Request Form	No later than Drop & Add week
Supervising Faculty Mentor Name (student must find on their own)	Up to 7 days after internship/co-op approval and registration
Industry Supervisor(s) Name	Up to 7 days after internship/co-op start date
Reflection Paper & Presentation to Industry Supervisor(s)	No later than two weeks before internship/co-op end date, or two weeks before end of classes, whichever comes first
Industry Supervisor Approval Form	Up to 7 days after receiving the reflection paper
Reflection Paper & Presentation to Faculty Mentor	At least one week before end of semester
Industry Supervisor Evaluation Letter	No later than last day of classes
Faculty Grade Submission	During finals week

Attendance Policy, Class Expectations, and Make-Up Policy

This is a variable credit course. If a student requests to complete the internship/co-op for 0 credits, then the student is expected to fulfill all requirements as if they are registered for 1 credit. The number of credits assigned for this course is determined of the number of hours the student works per week during the internship/co-op and total number of hours completed over the course of the term. Experiences must be at least four (4) weeks in length, and no more than 40 hours per week may be counted toward the experience. Each credit requires at least 160 hours of work. Below is a **non-exhaustive** list of example internships and the credits that could apply:

- 4 Week Internship:
 - 1 credit = 40 hours per week (160 hours of work total)
- 8 Week Internship:
 - 1 credit = 20 hours per week (160 hours of work total)
 - 2 credits = 40 hours per week (320 hours of work total)

- 14 Week Internship:
 - 1 credit = 12 hours per week (168 hours of work total)
 - 2 credits = 23 hours per week (322 hours of work total)
 - 3 credits = 35 hours per week (490 hours of work total)

Participation is a crucial part of an Internship/Co-op experience. Excused absences must be consistent with university policies in the Graduate Catalog (<https://catalog.ufl.edu/graduate/regulations>) and require appropriate documentation. Additional information can be found here: <https://gradcatalog.ufl.edu/graduate/regulations/>.

Industry Supervisor Expectations

The Industry Supervisor(s) is expected to meet with the student at least once a week, though more frequent interactions are strongly encouraged.

Evaluation of Grades

The grade evaluation will be assigned based on four criteria, with a grade of zero (0, *Unsatisfactory*) or one (1, *Satisfactory*).

1. **Faculty Mentor Name & Industry Supervisor Name:** Submit the name of your Industry Supervisor and your Faculty Mentor. Student must secure their faculty mentor on their own. Students must submit all required work by the deadline date to receive a passing grade.
2. **Submission to Industry Supervisor and Submission Supervisor Approval Form:** Completion of the course requires submission of the Practical Work Reflection Report written by the student and an industry supervisor(s) approval form on the report. The student is responsible for submitting the Reflection Report to their industry supervisor(s) in an adequate timeline to allow for the completion of supervisor's approval form and subsequent submission to their faculty mentor.

The Reflection Report should describe the student's experience in detail. The report should be formatted double-column IEEE and submitted as a PDF file. It should be **2-3 pages** and **2500 words (+/- 50 words)**, excluding any acknowledgements and/or references. It should include, at a minimum:

- A personal reflection from the student about the experience, anchored in the student's career and goals.
- A clear description of the project work completed by the student, with quarterly milestones (4 in total).
- Key challenges, difficulties, and successes experienced by the student.
- How the practical work contributed to student learning / education and professional development.

The Approval Form describes the evaluation by the supervisor(s) of the report. It must include:

- Evaluative comments about the accuracy of the project description as written by the student.
- An overall evaluation of **Satisfactory** or **Unsatisfactory**.

3. **Submission to Faculty Mentor:** The student is responsible for submitting the Reflection Report to their faculty mentor at least one week before the end of the semester. Their faculty mentor reviews the report and provides an overall evaluation of **Satisfactory** or **Unsatisfactory**.
4. **Supervisor Final Evaluation Letter:** A formal Evaluation Letter written by the student's industry supervisor(s) is due to the Academic Advising office one week prior to the end of the final examination period for the semester (last day of classes).

The Evaluation Letter describes the supervisor(s)'s experience(s) with the student. It must include:

- Dates worked.
- Role student played and the nature of the work.
- Evaluative comments about job performance and student contribution to the organization.
- An overall evaluation of **Satisfactory** or **Unsatisfactory**.

Grading Policy

Percent	Grade
83.4 - 100	S*
0.0 – 83.3	U

The grade evaluation will be assigned based on four criteria described above, with a grade of zero (0, *Unsatisfactory*) or one (1, *Satisfactory*):

- Did the student submit the name of their faculty mentor and industry supervisor(s) in a timeline manner?
- Does the report document the criteria as described and follow guidelines / requirements?
- Is the work completed nontrivial and commensurate with the number of credits registered?
- Did the student complete work satisfactorily as part of the practical work?

Students must receive a marking of one (1, *Satisfactory*) on all criteria to earn a grade of ***Satisfactory (S*)***.

Late Submission Policy

Given the variability in internship and co-op start and end dates, timely submission of required materials is critical for evaluation and grading. The following guidelines establish clear expectations for on-time versus late submissions and the corresponding penalties:

- Timely Submission: All required documents, including the Reflection Paper, Industry Supervisor Approval Form, Faculty Mentor Approval, and Industry Supervisor Evaluation Letter, must be submitted by the deadlines outlined in the "Important Dates" section. These deadlines are based on the student's individual internship/co-op timeline and must be strictly followed to ensure proper evaluation.
- Grace Period: If a delay is anticipated, students must request an extension in writing before the original deadline. Extensions are subject to approval by the faculty mentor and academic advisor. Without an approved extension, late submissions will not be accepted.
- Exceptional Circumstances: If a student encounters significant unforeseen circumstances (e.g., medical emergencies, natural disasters, or other critical situations), they must provide official documentation and request an extension in writing. Requests will be reviewed on a case-by-case basis by the Graduate Coordinator and academic advisor.
- Final Deadline Compliance: All submissions must be completed by the last day of classes as indicated in the academic calendar. No extensions will be granted beyond this date, except in cases of officially documented emergencies reviewed by the Graduate Coordinator.

By adhering to these guidelines, students ensure a smooth evaluation process and timely completion of course requirements. If there are any questions regarding deadlines or submission expectations, students should contact their faculty mentor or academic advisor as early as possible.

More information on UF grading policy may be found at:

[UF Graduate Catalog](#)
[Grades and Grading Policies](#)

Students Requiring Accommodations

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 semester.

Course Evaluation

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.bluer.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

In-Class Recording

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.

University Honesty Policy

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 (<https://sccr.dso.ufl.edu/process/student-conduct-code/>) specifies a number of 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.

Commitment to a Safe and Inclusive Learning Environment

The Herbert Wertheim College of Engineering values varied perspectives and lived experiences within our community and is committed to supporting the University’s core values, including the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information, and veteran status.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:

- Your academic advisor or Graduate Coordinator
- HWCoe Human Resources, 352-392-0904, student-support-hr@eng.ufl.edu
- Pam Dickrell, Associate Dean of Student Affairs, 352-392-2177, pld@ufl.edu
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@eng.ufl.edu

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as

appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <https://registrar.ufl.edu/ferpa.html>

Campus Resources:

Health and Wellness

U Matter, We Care:

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: <https://counseling.ufl.edu>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Discrimination, Harassment, Assault, or Violence

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/>.

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu.
<https://elearning.ufl.edu/>.

Career Connections Center, Reitz Union, 392-1601. Career assistance and counseling; <https://career.ufl.edu>.

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.
<https://teachingcenter.ufl.edu/>.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.
<https://writing.ufl.edu/writing-studio/>.

Student Complaints Campus: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>; <https://care.dso.ufl.edu>.

On-Line Students Complaints: <https://distance.ufl.edu/getting-help/>; <https://distance.ufl.edu/state-authorization-status/#student-complaint>.