



FACULTY-LED
STUDY ABROAD

KIIS Argentina Program, Summer 2026

CS 475-1 Topics: Artificial Intelligence and Machine Learning

Instructor: Dr. Jan Pearce

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Instructor's office hours: on site and by appointment

Syllabus subject to change

1. Course Description:

This immersive travel abroad course invites students to delve into the landscape of artificial intelligence (AI) and machine learning (ML) in Argentina by blending theory with hands-on practical applications. Students will progress through key AI topics, first exploring optimization techniques and problem-solving approaches, then mastering probability and Bayesian methods for handling uncertainty, and finally learning essential machine learning algorithms, such as regression and pattern-matching in text and image applications. Students will also utilize a variety of AI tools, including Gemini in Google Collab Notebooks for AI application projects.

In addition, students will learn about AI applications in Buenos Aires and greater Argentina which extend across multiple sectors including agriculture (optimizing production by analyzing climate conditions), manufacturing (optimizing goods production), and notably in the judiciary, where the Artificial Intelligence Laboratory of the Prosecutor's Office of Buenos Aires has developed predictive technologies to assist lawyers in various proceedings.

2. Overall KIIS Program Student Learning Outcomes:

KIIS Study Abroad Mission Statement:

KIIS provides high-quality education abroad programs for students from all diverse backgrounds that promote deep international learning, are integrated into the curriculum, and encourage critical and creative thinking. Our goal is to help students understand the wider world and develop personal and professional skills for lifelong enrichment. We strive to go beyond generalizations and cultural stereotypes to help foster a nuanced appreciation of the world in which we live.

Students participating on KIIS study abroad programs aim to:

- 1) Understand contemporary issues of their host country/countries (i.e. KIIS program location).
- 2) Develop skills to interact comfortably in a global setting.
- 3) Understand other cultures.

Prior to your KIIS study abroad program, and again at the conclusion of your program, KIIS will ask each student to a) answer a few multiple-choice questions, and b) write a short reflective essay (two paragraphs in length) related to the elements detailed above. There is no right or wrong answer, and your responses will not affect your grade in any way. The purpose of the exercise is to help KIIS measure the effectiveness of its study abroad programs.

3. Course Objectives and Specific Learning Outcomes:

Upon successful completion of this course, students will be able to:	How students will practice each outcome:	How student achievement of each outcome will be assessed:
1. Explain and discuss what AI is and is not, how AI methods solve problems, and the societal implications of AI.	Readings/Visits/Class discussions	Worksheets and short essays
2. Describe machine learning and classifiers including the concept of overfitting.	Readings/Class discussions	Worksheets and short essays
3. Articulate the concepts of neural networks and deep learning, including how data affects the results of machine learning.	Readings/Class discussions	Worksheets and short essays

4. Synthesize the information you learned to formulate a final presentation and final report on an approved subtopic in AI and/or ML.	Readings/Class discussions	Short essays/Independent research & presentation
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4. Major Topics covered in the Course:

What generative AI is, including related core AI concepts

- How AI works, and how a generative AI project is planned
- What AI is and is not capable of; and ways to create efficient prompts
- Advantages and disadvantages that AI technology brings to individuals, businesses, and society
- How machine learning and deep learning work, and how models are trained
- How data is analyzed by and used used in these models, and how it affects the outc

5. Fulfillment of General Education Requirement:

This course is expected to meet the Active Learning Requirement (ALE) at Berea College in the old General Education Program; in the Applied Disciplines Way of Knowing in the new General Education Program; and count in any one of the following in the Computer and Information Science Major (student choice of which): 1) the entry-level Exploratory Category, or 2) the upper-level Design category or 3) the upper-level Additional Category.

6. Required Readings and Materials:

- **Primary Texts:** [Elements of AI](#). We will use two interactive books, **Introduction to AI** and **Building AI** published at this site. Both books contain excellent sections on machine learning as well as AI. Successful completion of either of these texts can lead to an optional free certification. The second book also offers three levels, beginning, intermediate, and advanced, where the specific certification is tied to the level.
- **Other online Materials:** We will also use many videos and shorter readings. You can access all course-related materials, including this syllabus, online.
- **Accounts:** Gmail and WhatsApp accounts will be used in the course. If you do not already have these, please create them--they are free.
- **Hardware:** A laptop computer with a physical keyboard is strongly recommended. A tablet or phone will be very unlikely to suffice.

7. Graded Assignments: Grades for the course will be calculated based on your work on the following items:

- **Participation (20%)** – You are expected to attend every class and to participate in out-of-class activities as directed by the instructor and the program director. KISS requires that any unexcused absence result in a grade reduction. Multiple unexcused absences may result in expulsion from the program. You will be graded here not just

on your attendance, but your attitude and active engagement with our guest speakers and tours (during excursions) and the class discussions and readings.

- **Course Activities/Homework (40%)** – For each class period and each excursion/speaker, you will complete a course activity or a short essay. I will assign a specific activity or essay topic for each session, but often these activities will ask you to relate the course readings or excursion to Taiwan. Typically, you will submit these by 8 AM each day.
- **Project/Presentation (40%)** Both AI and ML are massive topics. For your final project you and potentially one partner will propose a subtopic area for deeper research and/or implementation. You will then complete a five-page structured report, and present this research to the class during our last two class meetings. You will be expected to reference only reputable articles, videos, and blog posts as your source materials.

All course assignments must be completed to receive a passing grade. There will be no extra credit offered. Your course will use the following scale:

A = 90-100% B = 80-89% C = 70-79% D = 60-69% F ≤ 59%

This course will be graded on this basis, without regard to other scales (i.e., plus-and-minus) which may apply at your college or university. Note KIS/WKU does not award +/- grades, only full letter grades.)

8. Generative AI Policy:

Students are permitted and encouraged to use generative AI in the following ways:

- **Brainstorming:** You may use generative AI to stimulate creativity, generate ideas, or brainstorm topics for computer code, papers, presentations, and discussions. The generated content must serve as a steppingstone, not a final product.
- **Citation Assistance:** AI tools can be used to manage, format, and organize citations and references, promoting adherence to academic writing standards and specific style guides required for individual assignments.
- **Grammar and Style Checking:** AI-powered writing enhancement tools may be used to help with spelling, grammar, syntax, and stylistic errors.
- **Concept Understanding:** Generative AI can be used to explain or simulate concepts taught in class, aiding in a deeper understanding.
- **Research Assistance:** AI can be used to conduct initial research, compile data, and summarize articles, books, or papers. It should not replace traditional research methods but rather enhance them.

You may not use generative AI in coursework in the following ways:

- **Plagiarism:** Using AI-generated content as your original work without attribution. This includes computer code, essays, images, reports and papers, presentations, and exam answers.
- **Data Manipulation:** Using AI tools to alter data or create misleading information.
- **Misrepresentation of Skills:** Using generative AI to complete tasks that are meant to assess your knowledge and skills.
- **Confidentiality Breach:** Using AI tools that might violate KIS/university policies or laws related to data privacy and confidentiality.

Metacognitive Reflection. In addition to a proper citation, the student should include the following statement with any assignment where generative AI is used for assistance.

"I used generative AI [INSERT NAME OF PLATFORM] for assistance in the following ways on this assignment: [INSERT WAYS USED, such as brainstorming, citation assistance, grammar and style checking, concept understanding, and research assistance, etc.]."

8. Attendance Policy:

KIIS program participants are expected to be punctual to and in attendance at all classes, presentations, meetings and required excursions, and to remain with the program for the full academic period. Unexcused absences from classes and/or mandatory meetings will result in a lowering of the student's final grade, as will excessive tardiness. Multiple unexcused absences could result in expulsion from the program. Any absence from an academic class session must be excused for medical reasons.

9. Disability Accommodation:

KIIS will make every reasonable effort to provide accommodations for program participants with special needs or disabilities, but we cannot guarantee that we will be able to do so. Be aware that many foreign countries do not have comprehensive legislation comparable to the Americans with Disabilities Act (ADA). As a result, businesses and other establishments operating in foreign countries may not be able to provide accommodations.

If you have a disability accommodation need, we recommend you contact your KIIS Campus Representative, <https://www.kiis.org/about-kiis/contact-us/campus-representatives/> early in your program selection process so that s/he has time to discuss any specific needs, including which KIIS programs may be best suited. You also are welcome to contact KIIS Assistant Director, Maria Canning, maria.canning@wku.edu, to discuss your disability accommodation needs (e.g. housing, transportation, excursions, class schedule, etc.).

Immediately after acceptance, notify KIIS Admissions and Enrollment Specialist, Haley McTaggart, haley.mctaggart@wku.edu, if you have a special need or disability that might require any form of accommodation abroad. Failure to notify KIIS may prevent you from participating on your KIIS program.

If you require any accommodations abroad, you must provide KIIS Admissions and Enrollment Specialist, Haley McTaggart, an accommodation letter from your home campus' disability accommodation office that lists the accommodations you are eligible to receive. Please do not request accommodations directly from your KIIS Program Director or other KIIS Faculty; the KIIS Office will notify your KIIS Program Director and/or Faculty after we have received your above accommodation letter.

In some cases, you may need to make arrangements for a caregiver to join you on your KIIS program, should your physician, campus disability accommodation office, or KIIS make such a recommendation or require it.

10. Title IX / Discrimination & Harassment:

Recent attention to gender discrimination and sexual harassment at colleges and universities reminds us of the importance of adhering to standards of ethical and professional

behavior. KIIS Study Abroad is committed to supporting and encouraging safe and equitable educational environments for our students, faculty, and program directors. Students, faculty, and program directors are required to be civil and treat each other with dignity and respect. As such, harassment and/or discrimination of any kind will not be permitted or tolerated.

Sexual misconduct (sexual harassment, sexual assault, and sexual/dating/domestic violence) and sex discrimination are violations of KIIS policies. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to a) KIIS Assistant Director, Maria Canning (+1-859-200-1000) or KIIS Executive Director, John Dizgun (+1-270-227-2288), b) WKU's Title IX Coordinator, Ena Demir (270-745-6867 / ena.demir@wku.edu) or WKU's Title IX Investigator, Michael Crowe (270-745-5429 / michael.crowe@wku.edu). Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a KIIS program director and/or faculty member, KIIS program directors and faculty are considered "Responsible Employees" of Western Kentucky University and MUST report what you share to WKU's Title IX Coordinator or Title IX Investigator.

If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's Counseling and Testing Center, <https://www.wku.edu/heretohelp/> at 270-745-3159.

For more information on KIIS Title IX, see <https://www.kiis.org/students/health-safety/title-ix-clery/>; additional Title IX resources can be found here <https://www.wku.edu/titleix/titleixbrochure2020.pdf>.

Everyone should be able to participate on a KIIS program, attend a KIIS event, or work in a KIIS environment (e.g. KIIS office) without fear of sexual harassment or discrimination of any kind. Be respectful of each other.