FSEM101_04  
Humans Need Not Apply: The Rise of Artificial Intelligence  
Spring 2020  
3 Credit Hours

Instructor: Dr. Siripong Potisuk  
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Office Hours: 1300 – 1600 hrs MW  
1000 – 1100 hrs MWF  
Class Time: 1100 – 1150 MWF (GRIMS 328)  
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COURSE OVERVIEW

Prerequisites: None

Course Description: This First-Year Seminar will address issues arising from recent significant advances in Artificial Intelligence (AI), an exciting technology inspired by the ways people take action based on the ability to sense, learn, and reason about their surroundings. AI is poised to become computational technologies with limitless possibilities that will have substantial impact on everyday lives including computers capable of problem-solving and human interaction. Specifically, this seminar will explore the influence of AI in our daily lives and its impact on humanity, especially the increasingly pervasive nature of AI in manufacturing, media, entertainment, medicine, etc. The course will primarily focus on three main topics: the future of work, privacy, and data security.

Course Goals: This course is aimed at providing first-year students opportunities for reading, critical thinking, inquiry and analysis, ethical reasoning and action, oral and written communication, as well as cultivating intercultural knowledge about the rise of artificial intelligence and its likely influences in a typical North American City by the year 2030. The course will begin with a reflection on what constitutes Artificial Intelligence and concludes with discussions on fairness, security, privacy, and societal impacts of AI systems as well as AI-related policy. Following are some of the big questions that will be confronted in this course: Is there a cause for concern that AI is an imminent threat to humankind? Will AI spur disruptions in how human labor is augmented or replaced in the near future? How are the economy and society transformed? Will society approach these AI-related technologies with fear and suspicion or with a more open mind? The ability to objectively answer these questions will undoubtedly have long-lasting influences on the nature and directions of AI developments in such a way that strikes a balance between the imperative to innovate with mechanisms to ensure that AI’s economic and social benefits are broadly shared across society.

Course Learning Outcomes: At the completion of the course, students should be able to

1. Analyze one’s own point of view critically about a position regarding AI influences. [Critical Thinking, Written Communication]
2. Examine and possibly propose solutions to overcome AI challenges faced by application designers and policy decision makers. [Inquiry and Analysis]
3. Apply ethical reasoning in assessing the social, economic, cultural, and political impact of AI. [Ethical Consideration]
4. Compare and contrast the willingness of different people around the globe to embrace AI-related technologies. [Intercultural Knowledge]
5. Differentiate the many different ways data can be presented, visualized, and interpreted in order to extract useful information for further analysis (The science of machine learning).

[Quantitative Literacy]

Required Materials: Reading articles will be posted to the course webpage and/or CITLEARN.

Course Format: The course is designed to develop students’ abilities in writing, critical thinking, ethical reasoning, and information literacy through critical inquiry on a specific topic. You’ll need these skills for your Citadel academic career, and to engage difficult questions throughout your life. The primary means of instruction for use in the course are lecture, facilitated discussion, group work, fieldwork, lab work, etc. We will use video clips, movies, stories, newspaper articles, and podcasts to better appreciate what AI and robots are, what they do, and how they impact our world.

COURSE RESOURCES

Writing/Tutoring Assistance: I strongly encourage you to visit the Writing Lab and Tutoring Center (in the Student Success Center in Thompson Hall), which offers one-on-one and group tutoring and consultations for students working on writing assignments.

CitLearn/Citadel’s Approved Learning Management System: Over the course of the semester, I may post reading notes, lesson plans, discussion prompts, self-guided lectures, grades, and other administrative information on the course CitLearn site. Students must check CitLearn each lesson for pertinent updates and other critical information.

Alternative Course Webpage: http://faculty.citadel.edu/potisuk

COURSE POLICIES, EXPECTATIONS, AND REQUIREMENTS

Disability Policy: The Citadel complies with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Students with disabilities who seek accommodations must make their request through Services for Students with Disabilities in the Student Success Center (117 Thompson Hall, 843-953-6877) to verify their eligibility and to identify appropriate accommodations. Students should speak to his/her professor and also make requests for academic accommodations to Services for Students with Disabilities during the first three weeks of the semester, except for unusual circumstances, so we can ensure these accommodations and facilitate student success.

Weather & Campus Emergencies: In case of adverse weather, or other campus emergency, critical information will be posted on the Bulldog Alert homepage, as well as pushed to email addresses and phone numbers of those people who have updated their contact information within the Bulldog Alerts section of the Lesesne Gateway (or CitLearn). If you have not yet updated your contact information, or set up course notifications within CitLearn, you should do so immediately.

Continuity of Instruction: During a pandemic or catastrophic event, and after all face-to-face instruction has been suspended, communication for our class will continue to take place through Citadel email and CitLearn. In the event of such an emergency, check your Citadel email account and CitLearn course announcements for instructions.

Code of Conduct: Responsibility for professional conduct rests with students as adult individuals and as members of The Citadel community. CGC students and cadets are expected to conduct themselves as responsible adults. All members of the campus community are expected to use reasonable judgement in all aspects of campus life and activity and to show due concern for the welfare and rights of others. Students...
are expected to adhere to all federal, state, and local laws. The Citadel protects freedom of action and speech, so long as the exercise of this freedom is not of an inflammatory or demeaning nature and does not interfere with the operation of the College. The Citadel’s Conduct Policy prohibits the possession of drugs, destruction of property, making false statements of emergency situations, physical or verbal abuse, or harassment of any sort. Students who violate the rules and regulations of The Citadel are subject to expulsion or lesser sanctions. These rules and regulations are published in “Regulations for Non-Cadet Students for Fall and Spring Semester and All Students, Including Cadets, for Maymester or Summer School,” which can be found online at: http://www.citadel.edu/root/images/cgc/cgc_catalog/cgc-academic-catalog.pdf

**Academic Integrity Statement:** Students will submit only their own work for evaluation in this course, except as appropriately documented. All rules and stipulations of The Citadel’s Honor Manual and Honor Code apply to this course, including its definitions and policies related to cheating, lying, stealing, and non-toleration. Cheating or evidence of academic dishonesty on any work submitted for evaluation will result in an “F” for both the assignment and the course. To ensure academic integrity, you must abide by both the letter and spirit of all honor, documentation, and citation requirements. Plagiarism in any form is unacceptable, as it fails to meet any standard of academic work. It is your responsibility to read and understand what constitutes intentional and negligent plagiarism. Plagiarism, intentional or negligent, will, in almost all cases, result in a 0-point F for the assignment, and may be referred as an honor violation. The complete Honor Manual may be found at: http://citadel.edu/r3/honor/manual.shtml and the Honor Code can be found in the Course Catalog; http://www.citadel.edu/root/images/cgc/cgc-academic-catalog.pdf. While it is permissible and recommended to rely on fellow students for assistance outside of classroom, it is not permissible to copy any portion of another student's work and pass it off as your own. Cheating and/or plagiarism in any form will be fully prosecuted under the Citadel honor code.

**Missed or Late Work Policy:** In order to pass the class, students are required to complete all assignments and expected to turn them in on time. Any late work will receive a 5% penalty for each day (including weekends) that it is late. No late assignments will be accepted once the final exam period has begun. However, to accommodate unforeseen or extenuating circumstances, the following guidelines will be adopted.

1. If you cannot turn in your completed assignments on the due date, electronic images of the work will be temporarily accepted via e-mail before 1159 hrs on the due date until a hard copy can be submitted.
2. If the circumstances are too severe to be handled by guideline #1 above, students must contact the instructor as soon as possible to make necessary arrangements.

**Attendance and Participation Requirements:** Students are expected to attend class on time. Attendance will be called at the beginning of every class, and the results reported via the Citadel’s electronic class absence system. It is the student’s responsibility to maintain class attendance throughout the duration of the semester. With this in mind:

1. Class attendance is mandatory.
2. Students may miss class only for authorized reasons (athletic events, academic travel, special ceremonies, guard duties, etc.)
3. Illness and personal emergencies may also cause students to be absent for legitimate reasons.
4. Should a student miss class for any reason, he/she will make every reasonable effort to notify the professor in advance of the absence.
5. The student will be responsible for any material covered in class.
6. If a student knows he/she will be absent for an examination or on the due date of a major graded requirement, that student will coordinate with his/her instructor for completion/submission requirements.
7. Whether excused or unexcused, absences in excess of 20% of the meetings of a particular course can, at the discretion of the instructor, result in a grade of “F” in the course.)
Classroom Policy: Classroom environment is an important factor for effective learning. Students are expected to strictly follow certain rules and regulations so as not to create unnecessary distractions and interruptions during class.

1. Food and drinks are strictly prohibited in the classroom.
2. Audible alarms of all electronic devices (cell phones, pagers, watches etc.) must be turned off.
3. Students may use laptop computers or tablets for taking notes so long as they do so in a manner that does not interfere with the learning of others. Students may not play games, work on other assignments, or use their electronic devices during class except for taking notes and/or completing instructor-assigned work.
4. Students are to refrain from talking to other students during class. Extraneous conversation creates noise and diminishes one’s ability to concentrate and pay attention.
5. Active participation in class discussions and activities is an expectation of this course.

Assignments:

1. In-class Activities, Facilitated Discussion, and Quizzes (20%)
   Since class time is devoted to discussion as well as mini lectures, it is essential that you not only read, but also reflect upon the assigned readings before coming to class. You may also be called upon randomly to contribute to in-class discussion and group activities. Quizzes on assigned reading will be administered throughout the semester.

2. A Position Paper and Debate on the Future of Work (25%)
   The paper should be about five pages long, double-spaced, and with one-inch margins and appropriately styled bibliography. Also, in class, we will debate the idea of Universal Basic Income (UBI) to combat AI disruptions in how human labor is augmented or replaced in the near future both in the United States and Globally. Half the class will take a firm position for it, and half against it.

3. A Paper on Ethical Consideration (10%)
   A writing assignment on autonomous weapons (Killer Robots) in which students examine and possibly propose solutions to overcome AI challenges faced by application designers and policy decision makers regarding the issue of how AI systems are used in the new era of warfare. Specifically, students are to answer the following question: “Should AI systems be allowed to kill?” The paper should be about two to three pages long, double-spaced with one-inch margins.

4. An Exercise on Quantitative Literacy (10%)
   Students will apply a machine learning technique called linear regression to determine whether a statistical relationship can be established between the variable to be predicted and some other variable that is either known or is significantly easier to anticipate. This ability to prepare a forecast – an expectation of what the future holds – is a crucial part of the data-driven decision-making process.

5. An Exercise on Intercultural Knowledge (10%)
   Students will carry out an exercise to articulate insights into own and other cultural rules and biases, and answer the following question: To what extent do you think cultural differences play a role in the way humans trust robots (and, more generally, technology)?

6. An exercise on Inquiry and Analysis (10%)
   Students should be able to demonstrate sophisticated understanding of the inquiry and analysis process based on scientific methods by paraphrasing and summarizing key concepts and ideas from a published research article using an IMRD presentation format.

7. Participation, Leadership, and Teamwork (10%)

8. Each student will also be required to conduct a survey on trust in technology. (5%)

Grading Scale: Final Grading is based on the following scale:

- A= 90-100%
- B= 80-89%
- C= 70-79%
- D= 60-69%
- F=59 and below
Important Dates:
- Monday, January 20th: Martin Luther King Jr. Day (No classes)
- Tuesday, January 21st: SCCC Drop/Add ends
- Monday, March 9th: Midterm Exam
- Friday, March 13th: Spring Break Begins After Last Class
- Sunday, March 22nd: Spring Break Ends
- Friday, March 27th: Student Excellence Day Activities (No classes)
- Tuesday, March 31st: SCCC Last Day to Withdraw With a “W”
- Tuesday, April 28th: SCCC Last Day of Class

COURSE SCHEDULE

Note: Schedule is tentative and subject to change. Additional reading/activities will be assigned as needed and the timing of topics may be adjusted.

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<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tr>
<td>01/15 – 01/17</td>
<td>Course Procedures and Logistics (Syllabus reading)</td>
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<td>Completion of Student Info and Learning Style Assessment</td>
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<td>01/20 – 01/24</td>
<td>Introduction to Critical Thinking: Concepts &amp; Tools</td>
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<td>01/27 – 01/31</td>
<td>Definition of AI; A Short History of AI and The Future of AI Research</td>
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<td>02/03 – 02/07</td>
<td>AI by Domain</td>
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<td>02/10 – 02/14</td>
<td>Prospects and Recommendations for AI Public Policy</td>
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<td>02/17 – 02/21</td>
<td>The Future of Work</td>
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<td>02/24 – 02/28</td>
<td>The Future of Work (continued)</td>
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<td>03/02 – 03/06</td>
<td>Ethics in AI</td>
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<td>03/09 – 03/13</td>
<td>Trust in Technology</td>
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<td>03/16 – 03/20</td>
<td>Spring Break</td>
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<td>03/23 – 03/27</td>
<td>Trust in Technology (continued)</td>
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<td>03/30 – 04/03</td>
<td>Global Perspective on AI</td>
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<td>04/06 – 04/10</td>
<td>Privacy and Data Security</td>
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<td>04/13 – 04/17</td>
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<td>04/20 – 04/24</td>
<td>Machine Learning and AI Data Science</td>
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<tr>
<td>04/27 – 04/28</td>
<td>Closing discussion</td>
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