CSC 340: Artificial Intelligence

Course Policies

Fall 2025

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[a] *This is the first door on the right as you enter Craton Hall from the main (south) entrance.*

"We could compare learning to . . . the way a pianist prepares for a concert. A pianist cannot cram his knowledge of music and his playing skill into one week or even one month of solid practice to prepare for a concert. But he prepares himself through consistent diligent practice, day by day over a long period of time."

—Joseph B. Wirthlin
(*Finding Peace in Our Lives*, p. 75)

Student Hours: Student hours are just office hours with a better name. They are held at these times:

Tuesday and Thursday from 12:00 PM to 4:00 PM.

or by appointment. If you can't make student hours physically but can drop in on Zoom, please let me know before hand. The Zoom link will be https://zoom.us/my/drmcbsvu. Please, feel free to drop in with your questions. No appointment is necessary.

My tentative weekly schedule is as follows:

Time	Monday	Tuesday	Wednesday	Thursday	Friday
7:00 AM					
8:00 AM	CSC340		CSC340		CSC340
9:00 AM	MAT115	MAT221	MAT115	MAT221	MAT115
10:00 AM	MAT343	MAT221	MAT343	MAT221	MAT343
11:00 AM	MAT221		MAT221		
12:00 PM	MAT221	Student Hours	MAT221	Student Hours	
1:00 PM		Student Hours		Student Hours	
2:00 PM		Student Hours		Student Hours	
3:00 PM		Student Hours		Student Hours	
4:00 PM					

AI Use Policy: The purpose of this course is to help you develop both skills and deep understanding—especially of mathematical concepts. Homework and assignments are designed to give you the practice you need to build those skills.

Some students may be tempted to use AI tools to complete their work instead of working through problems themselves. This is like signing up for a weight training class but using a machine to do the lifting for you——you wouldn't build the strength you need. The same is true here: if AI does the work, you miss the chance to develop the understanding and skills necessary for success in this course and in future courses.

That said, AI can be a helpful learning aid when used appropriately. Think of it like using a box to assist with pull-ups: you can use the box to help you get above the bar, then slowly lower yourself to build strength. After a while, you'll be able to do pull-ups without the box. Similarly, you can use AI to help you get "unstuck" on a problem—by asking for hints, clarifications, or explanations of a concept—rather than simply asking for the full answer. This is what I refere to as using AI wisely.

Guidelines for using AI in this course:

- **Wise use:** Asking AI for hints, clarifications, or help understanding a concept on homework.
- **Not acceptable:** Having AI fully complete homework or assignments for you.
- **Not acceptable:** Using AI at all on exams or quizzes.
- **Goal:** Use AI as a tool to support your learning, not replace it.

If you rely on AI to do the work for you, you may finish assignments faster, but you will not develop the skills you need to succeed—not just in this course, but in all courses that build on it.

Textbook: We will be using *Python Machine Learning*, 3$^{\text{th}}$ Edition, by Sebastian Raschka and Vahid Mirjalili.

Course Description from Catalog: Fundamental concepts and methods for developing computer systems that acquire and reason about knowledge, including: knowledge representation, problem solving and search, planning, vision, natural language comprehension and production, learning, common sense reasoning, and expert systems. Prerequisite: CSC 240

Course Overview: This course provides an introduction to the field of Artificial Intelligence (AI), with a particular emphasis on machine learning. The course covers examples of supervised and unsupervised learning, reinforcement learning, and deep learning. Students will have the opportunity of developing some implementations in raw Python as well as learning how to implement these methods using Python and popular libraries such as sklearn. The course will also explore the ethical implications of AI and its impact on society.

Course expectations:

- Regular attendance is essential and expected.
- In general, it is expected that you will spend at least **2 hours** outside of class for each hour in class in order to understand the material. To achieve excellence, more time may be required. So, budget at least 6 hours each week (in addition to class time) to spend learning this material. Note that if you are taking 15 credits that comes to about 45 hours of work a week.
- Cell phone usage during class is very distracting and is strongly discouraged. Unless you are expecting an emergency call, keep your cell phone on silent. Please do yourself a favor and allow yourself to focus by not using your phone.
- Class time is work time. During the times we meet, I expect you to be ready to work. This is not a lecture series in which you can sit and listen passively. My goal will be to get each of you to exercise your minds each day in class.

Scope and Sequence: This course will you the textbook as a guide and visit a number of topics in this text. At times, we will need to supplement the text with additional material. Tasks and small assignments will help us get into the material. The course will be divided into three units, each culminating in either a midterm project or final project.

Grading Scheme:

Assignments	10%
Tasks	30%
Midterm Projects	30%
Final Project	30%
Total	100%

(The percentages guarantee at least the following letter grades.)

A	93%	C+	77%
A-	90%	C	73%
B+	87%	C-	70%
B	83%	D+	67%
B-	80%	D	63%

Assignment (16%): These are low stakes assignements designed to help you engage with the material. These may take various forms, including watching and reacting to a particular video, reading a short article and answering questions, or completing a brief coding exercise.

Tasks (30%): Tasks are designed to help you practice and apply the concepts learned in class. These tasks may involve coding exercises, problem-solving activities, or small projects that require you to implement AI algorithms using Python.

Midterm Projects (30%): There will be 2 midterm projects, each worth 15% of your final grade. These projects will require you to apply the concepts learned in class to real-world problems. You will be expected to implement AI algorithms using Python and present your findings in a written report. Detailed instructions and rubrics will be provided for each project, and deadlines will be listed in Canvas.

Final Project (30%): This is the same as a midterm project but is a little more involved. Detailed instructions and rubrics will be provided, and the deadline will be when are class is schedule to meet for the final, which is Monday, December 15, 2025, from 12:30 to 3:20 PM.

Core Learning Goals (CLG): Students completing Southern Virginia's core curriculum are expected to attain the following college-level competencies:

- *Careful Writing:* Ability to present arguments in clear written English with proper spelling, grammar, vocabulary, and transitions.
- *Critical Thinking:* Ability to separate a conclusion from its premises and evaluate how well the premises support the conclusion.
- *Analytic Reasoning:* Ability to evaluate a body of evidence and draw appropriate conclusions.

Core Values: Students demonstrate:

- *Scholarship* by coming prepared to class, focusing on activities in class, and meticulously completing homework assignments.
- *Discipleship* by being respectful of others and showing courtesy and concern for others and the learning environment.
- *Accountability* by faithfully attending class and coming on time, coming prepared, being aware of assignments given and completing them on time.
- *Enthusiasm* by participating in class discussions and completing in-class activities, showing interest in cultural material and discussions about mathematics in general.
- *Refinement* by going above and beyond in living the dress and grooming standards, their manner of speech and actions, cleaning up the classroom and following proper classroom etiquette. This includes not using cell phones (texting, etc.) or other electronic devices that may disrupt learning in the class.

Student Learning Outcomes (SLO) for the Mathematics Major: A student successfully completing this major will;

1. Competently work with the concepts of calculus, differential equations, geometry, analysis, algebra, and statistics. (Foundation-Formulate)
2. Learn to read, understand, analyze, and produce proofs at increasing depth. (Mathematical Proofs-Prove)
3. Use appropriate technology to enhance mathematical thinking and understanding, solve mathematical problems, and judge the reasonableness of results. (Technology-Solve)
4. Exhibit knowledge of formulating and solving problems, interpreting solutions, and modeling techniques central to applications of mathematics. (Mathematical Modeling -Model)
5. Demonstrate the ability to effectively communicate mathematics and other quantitative ideas in written and oral forms. (Communication-Communicate)

Course Goals: After completion of the course you should be able to do the following:

- Show that you have learned the basic facts of this course, including mathematical notation and terminology used in this course. (SLO 1)
- Write systems of linear equations as matrix and vector equations, perform basic matrix algebra, solve systems of linear equations using various methods, including but not limited to using technology, and use and interpret vectors and linear transformations. (SLO 1, 2, 3, 4)
- Use the properties and theorems of a vector space, a subspace, and a basis for a vector space. Understand and apply the concepts of linear independence and linear dependence. (SLO 1, 2)
- Compute eigenvalues and eigenvectors, and generalized eigenvectors of a matrix, diagonalize a matrix and solve equations using the diagonalization process. (SLO 1, 3, 4)
- Become comfortable reading, analyzing, and writing basic mathematical proofs in relation to the subject matter. (SLO 1, 2, 5)

Title IX: Southern Virginia University is committed to providing an environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking.

Southern Virginia University, in compliance with Title IX, supports the academic success of pregnant students and students with pregnancy-related conditions (pregnancy, childbirth, termination of pregnancy, lactation, and all related medical conditions or recovery). Students may request reasonable, related modifications from the University by contacting the Title IX Coordinator at titleix@svu.edu.

Title IX of the Education Amendments of 1972 states that "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance." Title IX applies to all employees and students and covers discrimination in programs, admissions, and activities.

You can report any concerns to the Title IX Coordinator, Nathan Friesema (titleix@svu.edu), your professor, the Wellness Center, or any university administrator. Please be aware that all instructors are mandated reporters, so by law, we must disclose details relayed to us about any possible Title IX infraction to the University's Title IX coordinator.

Accommodations: Southern Virginia University is committed to providing a learning environment that accommodates and supports students with disabilities through accommodations. The Office of Accessibility Services oversees Academic Accommodations. Students with any type of physical, medical, psychological, or emotional disability may be eligible -

through the Americans with Disabilities Act (ADA) - to receive accommodations to provide equal access to the academic settings. Any student seeking accommodations should contact the Office of Accessibility Services by emailing accessibility@svu.edu. Students are advised to take care of the necessary documentation and paperwork early in the semester. Accommodations are not made until the student follows the procedures outlined on the website, (https://catalog.svu.edu/policies/accessibility-and-accommodations) receives an official accommodation letter **AND** discusses it with their professors.

Academic Honesty: Following the code of conduct, (https://svu.edu/about/faith/code-of-conduct/), students are expected to "be honest in all things, obey the law and follow university policies, and not cheat, steal, or plagiarize." The objective of every faculty member is to empower students by providing opportunities for learning in the best environment possible. If there are questions about what is honest or dishonest behavior, please speak to your professor. Violations of academic honesty are reported to the Office of the Provost and appeals are handled through the student grievance process.

Wellness

We are located on the second floor of Main Hall, Room 234. We are open from 8am to 5pm Monday to Friday. To schedule an appointment with a therapist please Call or Text 540-261-8474, email counseling@svu.edu, or stop by in-person. We strive to accommodate same-day appointments for urgent needs whenever possible.

For Mental Health Emergencies After Hours

Please use any of the following options:

- **Call or text 988** — Suicide and Crisis Lifeline
- **1-855-222-2046** — Rockbridge Area Community Services Behavioral Health Hotline
- **540-261-4911** — SVU Campus Security
- **Visit the ER** — Carilion Rockbridge Community Hospital
  1 Health Circle, Lexington, VA 24450
- **Call 911**