Instructor
Rob LeGrand
e-mail: rlegrand@angelo.edu
webpage: http://www.cs.angelo.edu/~rlegrand/
office phone: 325-486-5422
office location: MCS 205I
office hours: by appointment

Description
A specialized course providing research opportunities for superior students majoring in computer science. This offering is in the area of artificial intelligence—specifically, adversarial games and machine learning.

Grading
The assigned grade will reflect progress on the research project.

Student learning outcomes
Students will demonstrate proficiency in the selected topic. In the case of this offering, the task will be to
- write a program that allows artificial agents to play each other at the game of reversi (Othello).
- build a generic artificial reversi-playing agent that uses a minimax search with a depth limit.
- build a heuristic evaluation function that takes the known state of the gameboard as input and uses its set of “genes” (weights of a neural network) to compute the estimated value of that state.
- use a genetic-algorithm approach to evolve “organisms” (sets of genes) in an attempt to find a robustly excellent reversi player.
- summarize work done and results in a final paper.

Class format
Regular research meetings will be held to discuss approaches for and progress on the project.

Academic honesty
Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. By remaining enrolled in this course you agree to adhere to the Academic Honor Code, which is contained in both print and web versions of the Student Handbook.

Accommodations
Persons with disabilities which may warrant academic accommodations must contact Student Services in order to request and to implement academic accommodations. For ASU’s policy on absences due to religious holy days, please see OP 10.19 at http://www.angelo.edu/opmanual/.