Game Agent C 2025-26 (Trial Event v2.7c1)

1. **DESCRIPTION**:
    - This event will determine a team's ability to design, train, and code an original computer Reinforcement Machine Learning Game Agent to solve a Target Game of their own design.
    - **A TEAM UP TO**: 2 **APPROXIMATE TIME**: 50 minutes
    - **IMPOUND**: No **THEORY TEST**: Yes
2. **EVENT PARAMETERS**:
    - Teams must submit their project with supporting documentation to the Event Supervisor on a thumb drive, or leave their laptop, when they take the Theory Test. Teams should pick up their devices in the afternoon.
    - The Supporting Documentation is the equivalent of a maximum 2-page typed document at minimum 10 point standard font, single spaced. This should be a page linked in the game. Be sure to include your interaction with any AI tools. See the rubric for requirements.
    - The project's opening splash page must include button links to screens for: Help, Documentation, game with Human player, game with Agent player, training the Agent, and to Quit the game. Again, see the rubrics for requirements, and the example project for one way to do all of this.
    - Each of the player options (Human and Agent) must include a splash screen with control explanations, and must have an ending splash screen with results.
    - The RML Agent must use the RML type given in the rubric: DQN neural network Agent. You may keep your Agent entirely within Godot as in one of the examples, or you may link to an integrated neural network you build using PyTorch.
    - The scientific theme for the Game for this season is the physics of time. Your docs should explain the connection.
    - The Game Type for this year is: Sidescroller.
    - Students must use Godot 4.5x as their game development environment and the GDscript programming language.
    - Freely available Generative AI tools, such as Gemini or CoPilot are strongly encouraged to be used, be sure to cite them in your project documentation. Use it to create your own personal tutor to help you code your Game and your Agent. Also, strongly consider using Zenva's GameDev Assistant addon for Godot. Consult the Event Supervisor early if you have questions.
    - No Internet access, external resources or computer programs, or other game assets or files are allowed at the game room location.
    - Supervisors will provide:
        - An example project using Godot 4.3, with Game, Agents and docs
        - Links to training materials to help guide the team's project development.
        - Scoring rubrics for the event.
    - Competitors to provide:
        - Computer with running Game and Agent and copy on a thumb drive.

3. **THE COMPETITION**
    - Scores on the rubrics will be completed during your demo time slot.
    - At the start of your chosen Block time, teams will take a 15-minute test on RML theory, Godot, and generative AI personal tutor use, without notes. There will be roughly 30 multiple choice questions.
    - After completing the test, teams will demonstrate their project for the judges. These time slots will be about 10 minutes and will require the team to demo their project, and answer questions on their code and development process. Teams should expect to first demo their game with a human player competing, followed by their Agent training, and then competing. They will answer questions about their Game, Agent, code, and development process. Teams will leave a copy of their Game and Agent with the judges for further review and scoring.
4. **SCORING**:
    - High Team Score wins. Scoring will use the rubrics on the website. Points:
        - SP = Splash Screens rubric score, 10 points max
        - GA = Agent rubric score, 40 points max
        - HP = Human Player Game rubric score 10 points max
        - AI = AI tutor score, 10 points max
        - TT = Theory Test score, 30 points max
        - **Team Score** = SP + GA + HP + AI + TT (100 points max)
    - Any team using files onsite that are not part of their Game Agent or their Target Game, outside resources or accessing the internet outside of the event site will be asked to leave the room and be disqualified from the event.
    - Teams may use one of the provided basic Target Game examples as their competition Target Game, but it will be scored lower than building their own.
    - Any team running one of the provided basic Game Agent examples as their competition Agent(s), or not having a Game Agent, will be second tiered.
    - Ties will be broken by comparing the point totals in the scoring areas in the following order:
        - Higher Game Agent rubric score
        - Higher Game rubric score
        - Overall Impression/Originality

Recommended Resources: Links to all materials are on this website:
https://sciolygameagent.wordpress.com/