

The Tech Innovator Project is designed to help members learn to use computer programming platforms and Artificial Intelligence (AI) tools.

Competitive Activities

Visual Presentation in Junior and Senior Age Categories

Senior Age Level - (14-18) Judging: Senior Only

1. The contest consists of:
 - a. Creating an app OR game using a development platform– 60%
 - b. Marketing the app or game using an Artificial Intelligence (AI) tool – 40%
2. Participants will create a working app or game. The app or game will be judged based on creativity, user experience, user interface, functionality, and technical complexity. See <http://4hrobotics.msucare.com/contests> for a sample rubric. The app or game may be developed using MIT App Inventor (<http://appinventor.mit.edu>), Scratch (<https://scratch.mit.edu/>), Gamemaker ([GameMaker | Make 2D Games With The Free Engine](#)), RPG Maker ([Make Your Own Game with RPG Maker](#)), or another platform of the competitor's choice.
3. Participants should prepare a 3–5 minute marketing presentation showcasing their app or game. The presentation should highlight how they created it, its real-world applications, and its potential impact. This helps 4-H youth develop the ability to explain and promote their creations, not just code them. The marketing presentation must incorporate an AI tool. For a sample marketing and presentation rubric see <http://4h.extension.msstate.edu>.

Resources

1. Website Resources for Juniors:
 - <http://appinventor.mit.edu/explore/>
 - <https://scratch.mit.edu/>
2. Website Resources for Seniors:
 - <http://appinventor.mit.edu/explore/>
 - <https://scratch.mit.edu/>
 - [Learn How To Develop Games | GameMaker Tutorials](#)
 - [Tutorials | RPG Maker | Make A Game!](#)

4-H Thrive

Positive Youth Development

Developing Competence

Adults create environments where youth can develop competence in their chosen project area.

Building Confidence

Youth build confidence as they learn to think for themselves, build mastery, and are recognized for their efforts.

Nurturing Caring

Adults nurture a caring environment where mutual trust between youth and adults is established. Caring relationships with adults are key to resilient youth.

Finding Connection

Youth build solid connections which are critical to their well-being.

Forming Character

Create a community where youth play an active role in developing their character.

Determining Contribution

Youth actively contribute to their clubs and communities.

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an equal opportunity
institution.***

AI Tool Marketing Presentation

The marketing presentation must use an Artificial Intelligence tool to “sell” the app or game created by the youth. The marketing presentation should be between 3-5 minutes long. Youth can expand on ideas of programming, app or game development, and how coding and technology impacts humans. Ideas of AI tools to use include Adobe Express to create a brand or logo, Canva to create an advertising flyer, or Suno to write a jingle. Contestants are not limited to these suggestions. Creativity is encouraged!

Seniors:

- A computer and a digital projector will be available. The contestant must provide any other visual aids used. Presentations must incorporate an Artificial Intelligence tool. No posters will be accepted. The contestant is responsible for ensuring their presentation will work on the computer provided. However, if contestants feel more comfortable, they are welcome to bring their own computer and digital projector. If a considerable amount of equipment must be set up for a visual, please let us know before the contest so adequate space can be arranged.
- A new marketing presentation is required to be developed each year that the 4-H'er competes in this contest. Creating a new presentation provides additional learning opportunities for the 4-H'er.
- The marketing presentation should highlight the app or game created by the 4-H'er.
- All participants should dress appropriately for the contest. For boys this means dress in slacks, polo shirt or button-down shirt. Absolutely no hats, saggy pants, or un-tucked shirts. For girls this means slacks or appropriate skirts, a nice top or dress.
- The type of app or game youth should develop is their own choice, however it should be age appropriate.

Juniors:

- Juniors in the 10 & 11 year old category will be asked to create a story OR game using the Scratch Jr. (<http://www.scratchjr.org/>) application. A theme for the story or game will be given before the contest. Participants will be asked to develop a presentation in addition to the story created in ScratchJr. It is important for 4-H youth to not only be able to code but also to discuss and explain what they have created with others. Participants should bring an iPad to showcase their story or game. The presentation should be 3-5 minutes in length. Participants should be prepared to show the judge their code and discuss terms such as: blocks, sequence, repeat, repeat forever, programming, and programmer.
- Juniors in the 12 & 13 year old category will be asked to create a game using the Scratch (<https://scratch.mit.edu/>) application or another game development platform (see above for suggestions). A theme for the game will be given before the contest. Contestants should create their game and download the file. Please keep in mind that there may be no Internet connection for participants to access their saved work during Project Achievement Days. Participants will make a 3-5 minute presentation to explain and discuss their game. Participants should be prepared to show the judge their code and discuss terms such as: algorithm, sprite, debugging, and loops among other terms.



4-H Tech Innovator Contest

Digital Game or App Development Rubric (60% of overall score)

Criteria	6 Points	5 Points	4 Points	3 Points	2 Points	1 Point
Creativity and Innovation	Highly original concept demonstrating exceptional creativity; unique approach that pushes technological boundaries	Highly creative design with innovative elements that stand out from typical projects	Moderately creative concept with some original ideas	Somewhat creative with limited originality	Minimal creativity showing slight modifications of existing ideas	No originality; concept appears directly copied or unimaginative
User Experience	Graphics and interactive elements are outstanding; creates immersive, highly engaging user journey	Excellent graphics and/or sound design that significantly enhances user interaction	Good graphics and/or functional sound design	Adequate but basic user experience	Limited user engagement with minimal design effort	Poor user experience with no attention to design elements
User Interface	Exceptionally intuitive interface; clear navigation with professional-level design aesthetics	Very user-friendly interface with minor, negligible usability challenges	Functional interface with some navigational complexity	Somewhat confusing interface with moderate navigation difficulties	Difficult to navigate with significant user experience barriers	Completely non-functional or unusable interface
Functionality	All features work perfectly; no errors or bugs detected; smooth, seamless performance	Nearly flawless functionality with minimal, inconsequential technical issues	Mostly functional with some minor technical challenges	Partially functional with notable performance limitations	Significant functionality problems affecting core experience	Completely non-operational application or game
Technical Complexity	Advanced coding demonstrating sophisticated programming skills beyond expectations	Complex coding showing advanced technical understanding	Moderate technical complexity appropriate for senior skill level	Basic programming with limited technical depth	Minimal technical skills demonstrated	No evidence of technical programming knowledge

Total Score: ____ / 30

Ribbon Color: Blue Red

White

4-H Tech Innovator Contest

Digital Game/App Marketing and Presentation Rubric (40% of overall score)

Category	5 (Exemplary)	4 (Proficient)	3 (Developing)	2 (Emerging)	1 (Beginning)
Purpose	Purpose is crystal clear, meticulously aligned with target audience, demonstrating an innovative and unique value proposition that sets the project apart	Purpose is well-defined, strongly aligned with target audience, presenting a compelling value proposition	Purpose is clear with general alignment to target audience, showing a basic value proposition	Purpose is somewhat unclear, with minimal connection to target audience	Purpose is vague, unfocused, and fails to address target audience needs
Developmental Insight	Demonstrates exceptional understanding of game/app development with groundbreaking, creative design that prioritizes extraordinary user experience and engagement	Shows comprehensive development insight with strong user experience focus and creative design elements	Exhibits general understanding of development with moderate user experience considerations	Displays limited development understanding with minimal user engagement	Lacks substantive insight into development process or user needs
Use of AI Tool	Masterful integration of AI tool with highly strategic, innovative marketing approach that significantly enhances project presentation	Effectively and creatively uses AI tool with clear marketing strategy	Utilizes AI tool with basic effectiveness and limited strategic approach	Minimal and rudimentary AI tool application	Ineffective or absent AI tool implementation
Presentation	Exceptionally professional, compelling presentation with superior visual design, crystal-clear communication, and highly persuasive delivery	Professional and engaging presentation with clear communication and strong visual elements	Adequately organized presentation with acceptable communication	Disjointed presentation with limited clarity or engagement	Unprofessional, unclear, and poorly executed presentation

Total Score: ____/20

Ribbon Color: Blue

Red

White