STEAM Center

ARTIFICIAL INTELLIGENCE OLYMPIAD

AIO PROJECT SUBMISSION GUIDE 2024

This short guide will help you understand the stages involved in submitting your Project for Arab Artificial intelligence Olympics. This guide will also provide information required to select your project idea and describe the steps to project submission.

HOW TO GET STARTED

Your project needs to meet certain requirements in terms of Arab Artificial intelligence Olympics. Your project will be reviewed along with all other project submissions to ensure a fair competition.

Before submitting your project idea to the AIO committee, you should consider the **following aspects**, and gather as much information as you can.

PROJECT IDEA — Identify the core idea of your project. What are you trying to accomplish?

TECHNOLOGY — Elaborate on the way you will leverage artificial intelligence and related technologies with your solution (e.g. which data and techniques will be used?)

PURPOSE — Build on your core idea to gather more details on the goals of your project. Focus on the solution you are proposing to deliver

TIMELINE — Identify the key dates for your project: When will you be ready to submit your final proposal, when will you start your project, when will the key deliverables be completed, etc.

ALIGNMENT — Make sure your project is aligned with the themes announced by AIO

Project Themes

You must submit a project built in high level programming language that offers a solution for a problem related to the following field:

The Future of Smart Cities

Implementation Tools

You must use one of the following implementation tools :

- Game
- Website
- Robot
- Mobile application
- Embedded System
- Microcontroller
- Computer Vision
- Internet of Things
- Machine Learning
- Software

WELCOME TO THE
AIO PROJECT DEVELOPMENT JOURNEY!

Preparing for the Project

Your mission is to identify a local issue affecting saving resources and social issues that could be solved using artificial intelligence (AI).

While doing this, you will learn more about problems you can solve to improve lives and make the world a better place.

You will also learn many **important skills** including:

- how to work as a team member
- how to clearly identify an issue and who it is affecting (the user)
- how to brainstorm solutions and select the best one
- how to decide which type of AI may be useful for your proposed solution
- how to ethically gather and use data to train a computer to help solve the issue
- how to test the prototype with users and use their feedback to improve your solution
- how to pitch your solution to people who will be able to help you take action

Timeline your project

■ You are here: Understanding the project submission process & gathering information
■ Gather additional information & fill up the project submission form

Submission forms must be sent via email info@steamcenter.co by Tuesday 20/2/2024
with the subject: '**AIO project - name of the team - name of the organization**

■ **Evaluation**

You will receive the approval or rejection of your idea by Saturday 2/3/2024

Approved by the judging committee: you may proceed with your work

Not approved by the judging committee: you will have until Thursday 5 /3/2024 to
submit a new idea. Final approval will be received on Saturday 7/3/2024

■ **Start working on your project**

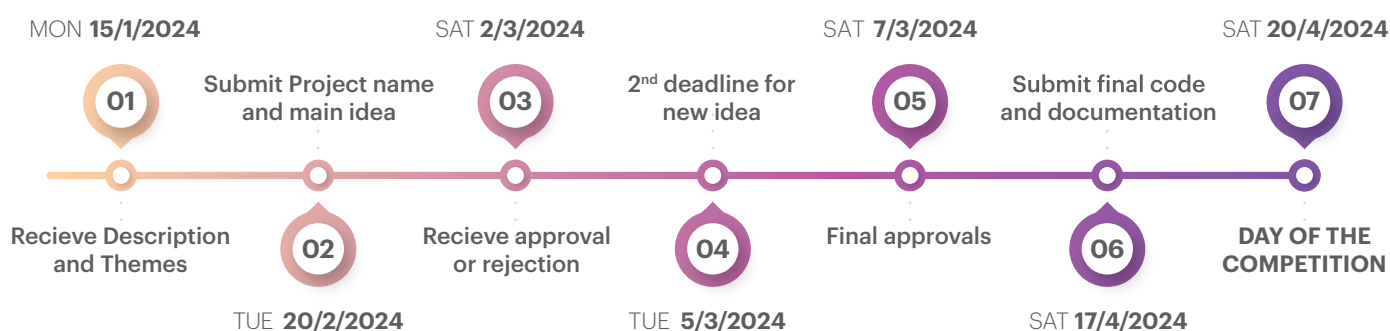You will have seven weeks to work on your project deliverables

■ **Final submission**

Early submission documents: 17/4/2024   • **Code**   • **Documentation**
Competition day submissions: 20/4/2024   • **Poster**   • **Prototype / software**

Note: submit all documents via email: info@steamcenter.co by Tuesday 20/2/2024
with the subject: '**AIO project - name of the team - name of the organization**'
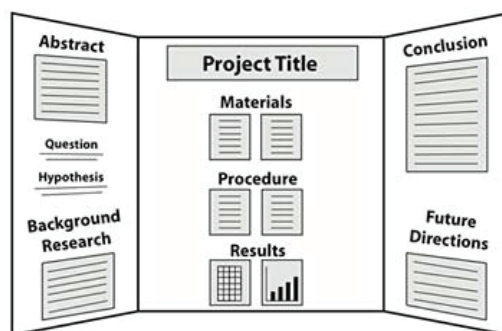
Deliverables Guidelines

1 Prototype (Software and Hardware (optional)):   **17/04/2024**
- Hardware or software
- Fully functioning
- Prototype should be authentic student work

2 Documentation: must contain the following chapters: **17/04/2024**
- Chapter 1: Introduction
- Chapter 2: Background and literature review
- Chapter 3: Solution Design
- Chapter 4: Data Analysis and Results
- Chapter 5: Conclusions and Future Work

3 Poster (120 cm x 120 cm), with the following headings: **20/04/2024**

4 Presentation and discussion before the judging committee   **20/04/2024**

Disqualifications

you may be disqualified from AIO, forfeit any prizes you may be eligible to receive, and be prohibited from participating if organisers reasonably believes that you have attempted any of the following:

1 Providing false information about yourself during registration or concerning your eligibility

2 Threatening or harassing other contestants

3 Tampering or interfering with administration of the Contest or with the ability of other contestants to participate in the Contest

4 Not commit to deadlines or deliverables

5 Submitting content in an entry that:
- **a.** Is not original (e.g., is copied from another student's work)
- **b.** Contains inappropriate content to the Contest
- **c.** Violates any applicable law

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INNOVATION PROJECT

For each skill area, clearly mark the box that best describes the team's accomplishments. Teams should demonstrate everything at the level; if they are missing part, mark the level below. If the team does not demonstrate an area, put an 'X' in the first box for Not Demonstrated (ND).

Please provide as many written comments as you can to acknowledge each team's hard work and to help teams improve. Use the back for additional comments if needed.

Team number: _____

Judgging room: _____

		Beginning	Developing	Accomplished	Exemplary
Research	**Problem Identification***	Clear definition of the problem being studied			
	N D	unclear; few details	partially clear; details missing	mostly clear; detailed	clear; very detailed
	Sources of Information	Quality and variety of data/evidence and sources cited			
	N D	minimal quality; variety limited	quality OR variety need improvement; did not include professional(s)	sufficient quality and variety; included professional(s)	extensive quality and variety; included multiple professionals
	Problem Analysis	Depth to which the problem was studied and analyzed by the team, including extent of analysis of existing solutions			
	N D	minimal study; no analysis	minimal study; some analysis	sufficient study and analysis	extensive study and analysis
Innovative Solution	**Team Solution ***	Clear explanation of the proposed solution and description of how it solves the problem			
	N D	difficult to understand	some parts confusing	understandable	easy to understand by all
	Innovation	Degree to which the team's solution makes life better by improving existing options, developing a new application of existing ideas, or solving the problem in a new way			
	N D	existing solution/application	solution/application contains some original element(s)	original solution/application; potential added value	original solution/application; demonstrated added value
	Solution Development	Systematic process used to select, develop, evaluate, test, and improve the solution (Implementation could include cost, ease of manufacturing, etc.)			
	N D	process AND explanation need improvement	process OR explanation need improvement	systematic process included evaluation	systematic process included evaluation; implementation considered
Technology	**Artificial Intelligence**	Project should implement AI solutions and students are required to understand and discuss the role of AI in their solution implementing AI concepts; machine learning, perception, representation and reasoning, natural interactions and societal impact			
	N D	It is unclear how or if the project uses AI, team members unable to present the AI abilities of their solution	The project utilizes AI to solve a problem; shows basic understanding of the Five AI concepts	Project shows a thorough understanding of the Five AI principles and how they relate to the problem	Project demonstrates a superb understanding of the Five AI principles and leverages AI's unique abilities to tackle the problem at hand
	Technical skills	Software and development execution efficiency			
	N D	Little to no understanding of the technical aspect of the solution	Some technical understanding; if the project doesn't involve coding, the team understands how it would be done if implemented	Good technical understanding and execution	Mastery of software development and execution; solution is elegant and efficient
	Programming quality	Programming quality: results accuracy, redability and reusability			
	N D	Incorrect results, difficult to read, not organized for reusability	Returns correct results occasionally, readable only by experts, some parts of the code are reusable	Returns correct results mostly, fairly easy to read and mostly reusable	Returns accurate results every time, exceptionally well organized and very easy to follow. Totally reusable

Comments

Great Job….   *Think about…*

		Beginning	Developing	Accomplished	Exemplary
Poster	**Organization/appearance**	Able to understand link between information presented and topic of research. Poster should be a balance of text, figures, space and overall Visual Appearance.			
	N D	Not organized or visually effective	Needs work to improve visual appeal and organization through better utilization of graphics, colors and headings.	adequate but could improve effectiveness through better use of space through graphics, colors, headings,	Utilized creativity in use of graphics, headings and colors to provide sequential information from introduction to conclusion and references
	Poster content	The poster should be able to stand alone as a clear communication of the project without the team present.			
	N D	No or poor connection between poster content and purpose of study, method, conclusions, or implications. Few or no sources documented.	Content presented was difficult to understand and did not sufficiently convey a connection to the study, method, conclusions, or implications. Cited sources were scarce or inadequately documented.	The content was adequately presented but support for the study, is somewhat general. Conclusion and implications were reasonable. Several sources were correctly documented.	Strong material. Well summarized. Clearly shows development of study or research with strong citation of sources. Material appears to accurately support purpose of study. Strong conclusions and implications presented.
Presentation	**Sharing ***	Degree to which the team shared their Project before the tournament with others who might benefit from the team's efforts			
	N D	shared with family / friends	shared outside family / friends (such as classmates)	shared with one audience who may benefit OR one professional	shared with multiple audiences who may benefit OR multiple professionals
	Creativity	Imagination used to develop and deliver the presentation			
	N D	minimally engaging OR unimaginative	engaging OR imaginative	engaging AND imaginative	very engaging AND exceptionally imaginative
	Presentation Effectiveness	Message delivery and organization of the presentation			
	N D	unclear OR disorganized	partially clear; minimal organization	mostly clear; mostly organized	clear AND well organized

Comments

Great Job….   *Think about…*

* Required for award consideration