## **Artificial Intelligence Research** [version number v1.0]

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# Terminology

Give a **definition** for the following **terminology** using your **own words.**

*(Minimum* ***two sentences*** *each)*

**Algorithm:** a set of rules that the computer follows to perform problem solving

**Artificial intelligence:** An intelligence created by a person and implemented onto a machine that can learn and think

**Chatbot:** software used to chat and have conversations

**Computer science:** is the study of computer hardware, software, systems, and applications using computation and algorithms

**Decision tree:** A flowchart used to represent a decision made like whether a coin becomes heads or tails

**Pseudo Code:** Code in plain English to help better understand how to implement your idea and for use as a placeholder and comment

**State Machine:** is a way to automate certain AI behaviours

# Behaviours

Choose **two** genres of games and describe the **behaviours** the AI follows within that genre *(Minimum* ***three******sentences*** *each)*

* FPS: If the AI Sees the player it will Seek them and Attack when in range. The AI can also Dodge grenades and use Cover to avoid enemy fire. The AI will even Retreat if its health gets too low and Seek additional Cover.
* Survival horror: in survival horror games like alien isolation you have to sneak around and hide from enemies to survive. The alien AI will traverse the map using set paths to see if it can find the player. Making too much noise can alert the alien to your presence and if detected and found the alien will rush and Attack

# Pseudo Code and UML Diagram

Choosing **one** of the genres you described above, **write very simple pseudo code,** and include an **Activity** **UML diagram** displaying and describing the behaviour of that chosen AI.

AI UML: [Patrolling, retreating and attacking](https://drive.google.com/file/d/1c0jaJ-TKyUOPOxXTkzdWIiaob7AdQILU/view?usp=sharing)

[Error Log](https://docs.google.com/spreadsheets/d/1gvmK0HAV6kAJnUq2h6VIiZVaCwZYlcNGnrf65bhsgCE/edit?usp=sharing)