Full Autonomous Artificial Intelligence in Attack or Defense Decisions Making in Military Drones Box: The NeuronDrone-Box

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Abstract: This research paper introduces the full autonomous artificial intelligence in attack or defense decisions making in military drones' system box (The NeuronDrone-Box): the hardware, algorithm, and a new special military Drone or Unmanned Aerial Vehicle (UAV). The first section presents the full autonomous artificial intelligence in attack or defense decisions making in military drones' system box (The NeuronDrone-Box) to adapt to any drone to the main control system of any drone. Second section is the algorithm is using chaos theory and Econographicology. third section we present the groundbreaking prototype known as the "Black Nightmare V.7". The Black Nightmare V.7 drone bombardier boasts a range of distinctive features and applications, which are detailed in this technical report. Firstly, we advocate for the implementation of the full autonomous artificial intelligence in attack or defense decisions making in military drones' system box (The NeuronDrone-Box) to control the Multiple Ailerons System (MAS) and Multi-Missiles System (MM-System) connected to the full autonomous artificial intelligence in attack or defense decisions making in military drones' system box (The NeuronDrone-Box).

Keywords: Unmanned Aerial Vehicle (UAV), drones, black nightmare V.7 drone bombardier, aerospace, aviation systems, the full autonomous artificial intelligence in attack or defense decisions making in military drones' system box (The NeuronDrone-Box)

1. Introduction

This technical report presents an alternative hardware the Full Autonomous Artificial Intelligence in Attack or Defense Decisions Making in Military Drones' System Box (The NeuronDrone Box), software (algorithm), and special drone called Black Nightmare V.7. Drone Bombardier. Hence, this research paper introduces a full autonomous artificial intelligence in attack or defence decisions making in military drones' system box (The NeuronDrone-Box) is presenting the hardware, algorithm, and a new special military Drone or UAV [1]. The first section presents the full autonomous artificial intelligence in attack or defence decisions making in military drones' system box (The NeuronDrone-Box) to adapt to any drone to the main control system of any drone 3 different control systems sources such as the Cube Orange box [2], the George UAV Autopilot [3], and the VPX3U-A4500E-VO (WOLF-1448) [4] wants to be centralized in a single box using these 3 systems simultaneously. Second section is the algorithm is using chaos theory and Econographicology [5] later we will adapt to the software configuration for each control systems source [6] and [7]. In the third section we present the groundbreaking prototype known as the "Black Nightmare V.7". The Black Nightmare V.7 drone bombardier boasts a range of distinctive features and applications [8], which are detailed in this technical report. Firstly, we advocate for the implementation of the full autonomous artificial intelligence in attack or defense decisions making in military drones' system box (The NeuronDrone-Box) to control the Multiple Ailerons System (MAS) and Multi-Missiles System (MM-System) in the Black Nightmare V.7 drone bombardier. This involves strategically placing all ailerons within the main body structure of the aircraft. Additionally, the Black Nightmare V.7 drone bombardier features an innovative propeller design referred to as the Silent Propeller System (SPS). This system incorporates a potent motor within the main structure, accompanied by a series of specialized propellers that operate in precise synchronization to reduce departure and landing noise levels by an impressive 99.5%. Furthermore, a cutting-edge concept called the Sensibility Winds System (SWS) is integrated, leveraging artificial intelligence for enhanced performance. In a bid for sustainability, the Black Nightmare V.7 drone bombardier is equipped with solar panels, ensuring a continuous charge to support its four powerful motors simultaneously. Notably, the Black Nightmare V.7 drone bombardier is capable of carrying four heavy bombs and three missiles (air-air). Finally, its versatile capabilities render the Black Nightmare V.7 drone bombardier indispensable for a wide array of military and national emergency missions [9].

2. The Full Autonomous Artificial Intelligence in Attack or Defense Decisions Making in Military Drones' System Box (The NeuronDrone-Box)

The first section presents the full autonomous artificial intelligence in attack or defence decisions making in military drones' system box (The NeuronDrone-Box) (see Fig. 1) to adapt to any drone to the main control system of any drone 3 different control systems sources such as the Cubepilot Ecosystem, VERONTE Autopilots, and Wolf-Advanced-Technology centralized in a single box using backups systems among all these three control systems according to different environments and circumstances.

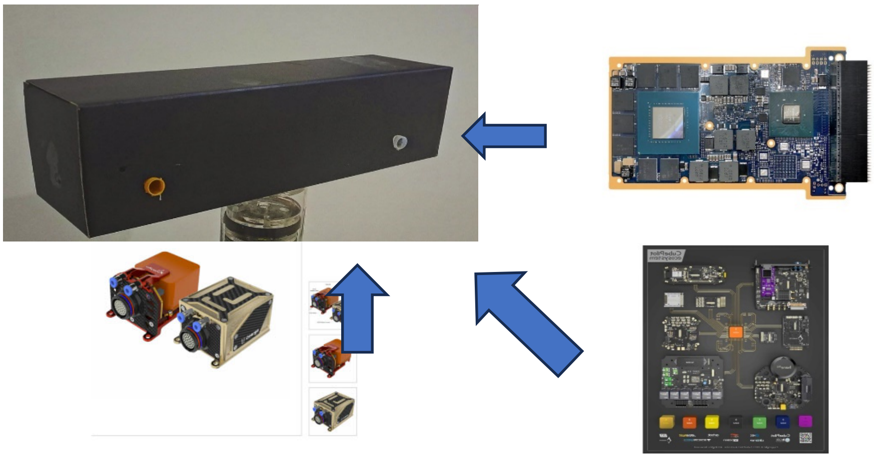

Fig. 1. The full autonomous artificial intelligence in attack or defense decisions making in military Drones' system box (The NeuronDrone-Box).

The Cube Orange from Cubepilot Ecosystem (see Fig. 2) is shows a high flexibility of its uses and adaptation in any drone, we are using as the first control system in the full autonomous artificial intelligence in attack or defense decisions making in military drones' system box (The NeuronDrone-Box).

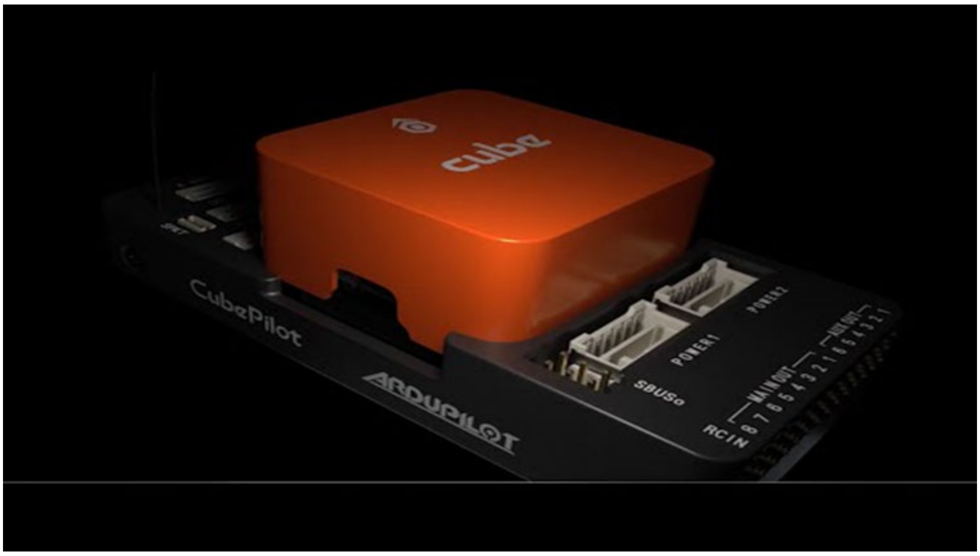

Fig. 2. The cube orange.

The second control system in the full autonomous artificial intelligence in attack or defense decisions making in military drones' system box (The NeuronDrone-Box) is the George UAV Autopilot from VERONTE Autopilot (VERONTE, 2024) (see Fig. 3).

Fig. 3. The George UAV autopilot.

The third control system in the full autonomous artificial intelligence in attack or defense decisions making in military drones' system box (The NeuronDrone-Box) is the VPX3U-A4500E-VO (Wolf-1448) from Wolf Advanced Technology (Wolf Advanced Technology), 2024 give a full support to the full autonomous artificial intelligence in attack or defense decisions making in military drones' system box (The NeuronDrone-Box) (see Fig. 4)

Fig. 4. PX3U-A4500E-VO (WOLF-1448).

Finally, the full autonomous artificial intelligence in attack or defense decisions making in military drones' system box (The NeuronDrone-Box) tries to allocate three control systems to generate more precision in any attack or defense systems with a high precision.

3. The Attacks or Defense Decision System (ADD-System) Algorithm: Theoretical Framework

The Attacks & Defense Making Decisions System (A&DMD-System) follows five fundamental phases: First Phase: Input and Storage in the possible attacks and Defense plots

In this initial phase, two sections are defined: Input and Storage (Refer to Stage 1). The Input section entails a variety of inputs (IX_i) derived from different information resources (espionage information), including quantitative data such as weak targets and high population density places. These inputs are further classified as positive (+) or negative (−) based on the type of information they represent (see Eq. (1)).

$$X_i = f\,(+/-IX_1, +/-IX_2, \ldots, +/-IX_\infty \ldots) \equiv IX_i = f\,(+/-IX_i) \text{ where } i = 1, 2, \ldots, \infty \tag{1}$$

In the Storage of the Mega-Database section, the information inputs (IX_i) are recorded in distinct databases (DBX_i) corresponding to i = 1, 2,… ∞ (see Eq. (2)).

$$DBX_i = f\,(DBX_1 < +/-IX_1 >, DBX_2 < +/-IX_2 >, \ldots, DBX_\infty < +/-IX_\infty > \ldots) \tag{2}$$

Second Phase: Visualization of possible targets

This phase involves real-time visualization of the possible attacks and timing enemies can arrive it (Refer to Stage 2). It is based on continuous inputs of information (Ix_i) along each respective axis (X_i) from various Mega-Databases (DBX_i) sources. The interconnected relationship between each input of information (Ix_i) and its corresponding axis (X_i) ensures that all multi-dimensional graphs within the possible targets are continually updated in real-time (see Eq. (3)).

$$MD = X1: [+/-Ix1], X2: [+/-Ix2], \ldots, X\infty: [+/-Ix\infty] \ldots \tag{3}$$

Third Phase: Alert of Possible Attacks and Defense Failures

In this phase, the system provides alerts for potential failures (Refer to Stage 3). The alerts are contingent on the position of the multi-dimensional graph within its physical coordinate system. If the information falls within the negative quadrant, denoted as $-X_i = [-IX_i]$, the SWS issues possible allocations (See Eqs. (4) and (5)).

$$\text{If } W_1\text{: } [-IX_1], -W_2\text{:}[-IX_2] , ………, -W_\infty\text{:}[-IX_\infty]… \tag{4}$$

$$\text{then } W_1\text{: [»Possible Attack«]}, -W_2\text{:[»Possible Attack«]} , …, -W_\infty\text{:[»Possible Attack«]} \tag{5}$$

Inputs in the negative quadrant, denoted as $-W_i$:[$-IX_i$], are labeled as “Weak Locations”. When the targets and defense identify an allocation (A_i), it initiates a search (☼) to determine its potential position within the attack speed (W_i) domain, as outlined in Eq. (6).

$$A_i = -IX_1 ☼ A_1 : -IX_2 \quad ☼ A_2 : … : -IX_\infty \quad ☼ A_\infty \tag{6}$$

Fourth Phase: Set of Directions of attacks and defense

This phase includes two sections related to the Mega-Database of final Directions (Refer to Stage 4). The Mega-Database of Final Directions is an amalgamation (╦) of numerous databases (DBX_i), each containing a range of possible attacks and defense points directions and speeds (Wi) (see Eq. (7)).

$$Dmi \quad = A_1\text{:}[\ \Sigma \quad DBX_1 \quad <W_1>] ╦ A_2\text{:}[\ \Sigma \quad DBx_2 \quad <W_2>] ╦ …╦ A_\infty\ [\ \Sigma \quad DBX_\infty \quad <W_\infty>] \tag{7}$$

Final Phase: Final Output of the targets and Defense

In this phase, the final output or attack and defense position by places (PO) is determined (Refer to Phase 5). This is derived from the last partial differentiation (fi) of the extensive list of attack and defense directions (Sx_i). The objective is to refine the strategy for optimum stability, minimizing risk and vulnerability of attack. (see Eq. (8)).

$$\begin{gathered} f(A_1) = A_1 \lozenge A_2 \lozenge … \lozenge A_\infty \\ f(A_2)' = A_1 \lozenge A_2 \lozenge … \lozenge A_\infty \\ f(A_3)'' = A_1 \lozenge A_2 \lozenge … \lozenge A_\infty \\ f(A_i)\mathrm{i} = \quad 0 \quad \text{thus } i = 1,2…\infty \end{gathered} \tag{8}$$

Initially, the mega-data disks coordinate space [9] is crucial part of the Attacks or Defense Decision System (ADD-System) Algorithm. We have a powerful an analytical graphical modeling to visualize and analyze a large amount of data. Firstly, this specific coordinate space shows one single vertical straight axis that is pending among all endogenous variables (the final decision of attack or defense: Shotting). Hence, we are available to plotting our endogenous variable on this single vertical straight axis that is represented by $\alpha_{V+/-}$ (Different factors are taking in consideration to attack or defend: Shotting). Secondly, each exogenous variable in analysis is represented by its specific coordinate system to attack or defend: Shotting such as $\beta_{\Phi i:\zeta j}$. Where “Φi” represents the sub-space level in analysis, in this case either from sub-space level zero ($SS_{0°}$) to sub-space level infinite ($SS_{360°}$); “ζ_j” represents the disk level in analysis at the same quadrant of exogenous variables (in our case, from disk level j = 1, disk level j = 2, disk level j = 3,…, to disk level $j = \infty$…). In fact, we assume that all exogenous variables are using only real positive numbers-rational factors of to decide or not shotting- (R_+). In order to plot different exogenous variables in the mega-data disks coordinate space, each value need to be plotted directly on its radial subspace in analysis (Φ_i) and disk level in analysis (ζ_j) respectively. Each “i” is a radius that emanates from the origin and in defined by the angle which can range from 0 to just before 360°, a theoretical infinite range of shotting. Each disk is a concentric circle that starts from the origin outwards towards a theoretical infinite value. At the same time, all these values plotted in different axis levels in analysis (Φ_i) and disk levels in analysis (ζ_j) need to be joined with its endogenous variable "$\alpha_{V+/-}$" until we build a series of coordinates to attack or defend (Shotting). All these coordinates need to be joined by straight lines until yields an asymmetric spiral-shaped geometrical figure with n-faces (see Fig. 2) and disk levels in analysis (ζ_j) need to be joined together by straight lines directly to the endogenous variable $\alpha_{V+/-}$ (final target to shotting) until a cone-shaped figure with n-faces is built. It is important to mention at this juncture that the endogenous variables "$\alpha_{V+/-}$" is fixed according to any change associated with its corresponding exogenous variables (precision levels) in $\beta_{\Phi i:\zeta j}$, where i = {0°, 1°, 2°,…, 360°} and j = {0, 1, 2,…, ∞…} , $\alpha_{V+/-}$. Hence, we can imagine a large number of exogenous variables moving all the time in different positions within its radius in real time continuously (decision of attack and defense (shotting). At the same time, we can visualize how all these exogenous variables directly affect on the behavior the endogenous variable *($\alpha_{V+/-}$) (Final Target to shotting)* simultaneously. $\alpha_{V+/-}$ is fixed according to any change can be occurred among the infinite exogenous variables in $\beta_{\Phi i:\zeta j}$, where i = {0°, 1°, 2°,…, 360°} and j = {0, 1, 2,…, ∞…}, $Y_{V+/-}$. Hence, we can imagine a large number of infinite exogenous variables moving all the time in different positions within its radius in real time continuously. At the same time, we can visualize how all these exogenous variables (rational or irrational decisions evaluation) are affecting directly on the behavior of the endogenous variable ($\alpha_{V+/-}$) (final decision to attack or defense: Shooting) simultaneously. Moreover, the endogenous variable ($\alpha_{V+/-}$) can fluctuate freely (see Fig. 5). In our case, the endogenous variables ($\alpha_{V+/-}$) can show positive/negative final decisions of attack or according to our multidimensional coordinate space. In the case of exogenous variables, these can only experience non-negative properties. The mega-data disks multivariable random coordinate space in vertical position is represented by:

$$(\beta_{\Phi i:\zeta j}, \alpha_{V+/-}) \text{ where } \beta_{\Phi i:\zeta j} \geq 0;\ i = \theta°\ ;\ j = R_{+} \geq 0;\ \alpha_{V+/-} = R_{+/-} \tag{9}$$

$$\alpha_{V+/-} = f\,(\beta_{\Phi i:\zeta j}) \tag{10}$$

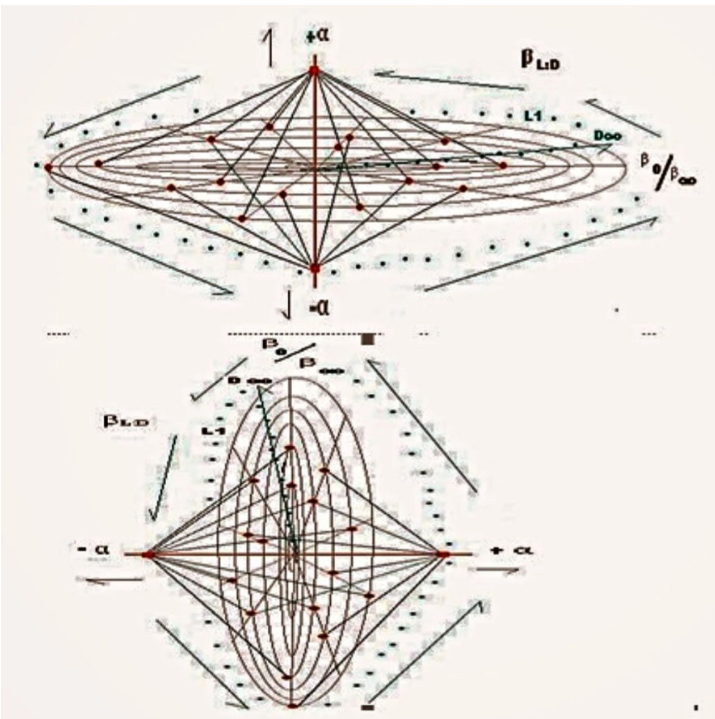

Fig. 5. The mega-data disks coordinate space.

Hence, this algorithm apply a specific trigonometry function such as the tangent $/\tan(\beta_{\varphi i:\Psi j}/\alpha_{h+/-})/$ or $/\tan(\beta_{\Phi i:\zeta j}/\alpha_{v+/-})/$ and inverse tangent $\tan(\beta_{\varphi i:\Psi j}/\alpha_{h+/-})^{-1}$ or $\tan(\beta_{\Phi i:\zeta j}/\alpha_{v+/-})^{-1}$. Initially, the calculation of the tangent $/\tan(\beta_{\varphi i:\Psi j}/\alpha_{h+/-})/$ or $/\tan(\beta_{\Phi i:\zeta j}/\alpha_{h+/-})/$ is equal to β (adjacent) divided by α (opposite). Our graphical modeling applies absolute value to eliminate negative values in the construction of our new coordinate space (Final attack: Shooting). The main objective to calculate the inverse tangent $\tan(\beta_{\varphi i:\Psi j}/\alpha_{h+/-})^{-1}$ or $\tan(\beta_{\Phi i:\zeta j}/\alpha_{v+/-})^{-1}$ is to find each angle that is located into the mega-data disks coordinate space in vertical and horizontal position. Therefore, the $\tan(\beta_{\varphi i:\Psi j}/\alpha_{h+/-})^{-1}$ or $\tan(\beta_{\Phi i:\zeta j}/\alpha_{v+/-})^{-1}$can help us to study easily the relationship between $\alpha_{h+/-}$ or $\alpha_{v+/-}$ (opposite) and $\beta_{\varphi i:\Psi j}$ or $\beta_{\Phi i:\zeta j}$ (adjacent) in different periods of analysis. In fact, we are establishing three different parameters are followed by (i) *the representative area* to attack or defense that keep angles between 50° and 40°; (ii) *the acceptable area* to attack or defense is located between 65°/51° and 41°/25°; (iii) *non-representative area* to attack or defense that is fixed between 65°/90° and 26°/0° (see Fig. 6). We like to mention that each $\tan(\beta_{\varphi i:\Psi j}/\alpha_{h+/-})^{-1}$ *or* $\tan(\beta_{\Phi i:\zeta j}/\alpha_{v+/-})^{-1}$ *is located between* 0° and 90° (see Fig. 6).

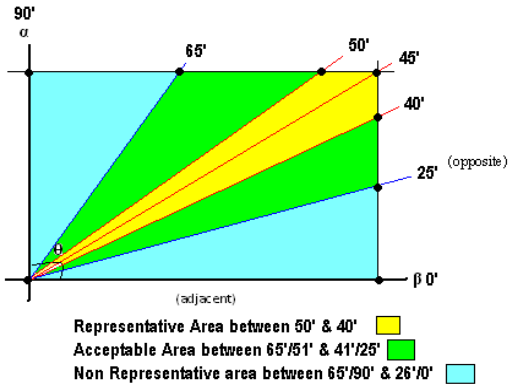

Fig. 6. $\tan(\beta/\alpha)^{-1}$.

Finally, all $\tan(\boldsymbol{\beta_{\varphi i:\Psi j}/\alpha_{h+/-}})^{-1}$ or $\tan(\boldsymbol{\beta_{\Phi i:\zeta j}/\alpha_{v+/-}})^{-1}$ results are organized in descendent order from the smallest angle to the largest angle. Finally, we transfer all these results to the mega-data disks coordinate space in vertical and horizontal position to visualize the behavior of all angles that help us to appreciate clearly the behavior of multi-data analysis before to attack or defense any target.

4. An Introduction to the Black Nightmare V.7. Drone Bombardier

The new prototype, Black Nightmare V.7 drone bombardier (refer to Figs. 7 and 8), represents a significant leap in aviation technology information [10], integrating robotics [11, 12] with advanced artificial intelligence [13]. This paper aims to highlight its distinct features and specifications, showcasing its exceptional capabilities (refer to Fig. 4). The Black Nightmare V.7 drone bombardier underwent rigorous evaluations, testing its speed and rotation resistance across various levels. These assessments confirm its potential as a groundbreaking air transportation system, offering superior propulsion and stability compared to conventional propeller and aileron systems.

The precision of the Black Nightmare V.7 drone bombardier (see Fig. 8) stems from its unique features and applications, as detailed in this technical report. Firstly, we advocate for the implementation of the "Multiple Ailerons System (MAS)" and Multi-Missiles System (MM-System) (see Fig. 7). Our proposal involves situating all ailerons within the main body structure of the Black Nightmare V.7 drone bombardier. Simultaneously, the aircraft introduces an innovative propeller design known as the "Silent Propeller System (SPS)" (see Fig. 9). Housed within the main structure, the Black Nightmare V.7 drone bombardier boasts a robust motor, complemented by a series of specialized propellers working in precise synchronization, resulting in a remarkable 99.05% reduction in noise during departure, flight, and landing.

Furthermore, a novel concept of “Sensibility Winds System (SWS)” employs artificial intelligence to enhance operational efficiency (see Figs. 7 and 8). The Black Nightmare V.7 drone bombardier is equipped to carry four booms or three missiles for air-air attacks, further extending its versatility (see Figs. 9 and 10). On top of the Black Nightmare V.7 drone bombardier, there is a missile designed to intercept and attack any aircraft or object that attempts to approach from above (see Fig. 11).

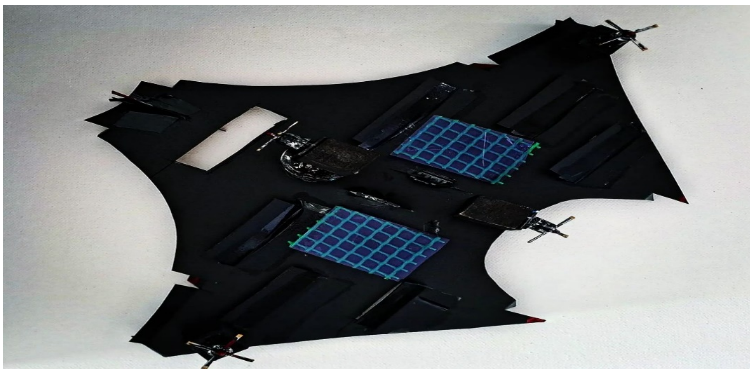

Fig. 7. Black Nightmare V.7 drone bombardier.

Fig. 8. Black Nightmare V.7 drone bombardier.

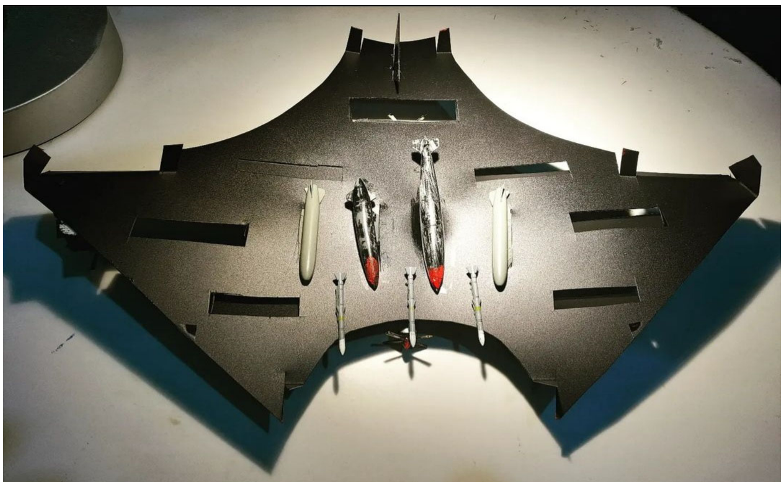

Fig. 9. Black Nightmare V.7 drone bombardier.

Fig. 10. Black Nightmare V.7 drone bombardier.

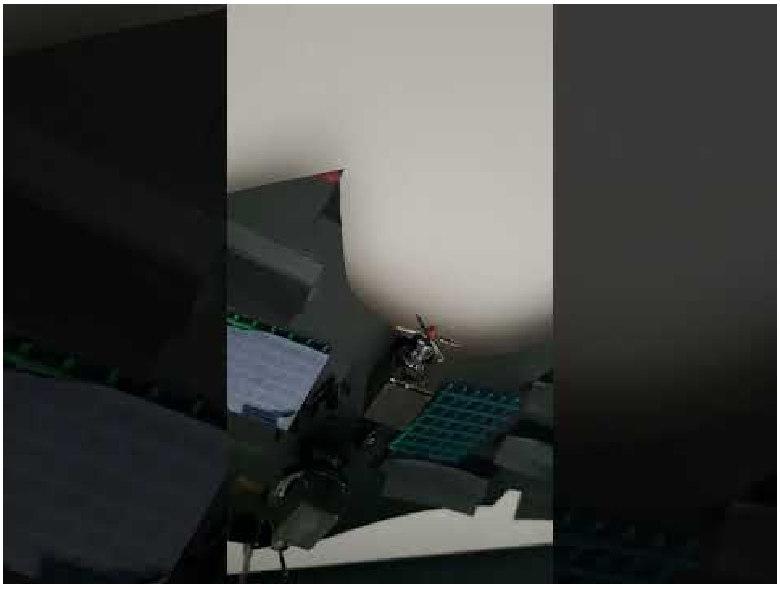

Fig. 11. Black Nightmare V.7 drone bombardier.

The strategic placement of propellers and ailerons within the Black Nightmare V.7 Black Nightmare V.7 main structure has been executed with remarkable precision, as depicted in Fig. 3. This meticulous placement serves the dual purpose of optimizing propulsion and enhancing aerial stability within short timeframes. Consequently, the synergy between the positioning of ailerons and the noise-reduction propellers is carefully orchestrated to ensure superior performance. This harmonization has been validated through a series of experiments conducted across diverse environments and under varying weather conditions [14]. The Black Nightmare V.7is primarily distinguished by its aileron and engine system configuration. Its foremost advantage lies in its near-silent operation while maintaining the capability to sustain static flight for up to seven seconds. This unique feature allows for precise cargo or munition drops, affording unparalleled precision and versatility under any circumstances [15]. A second differentiating factor is the adaptability of the Black Nightmare V.7 wings, which can seamlessly transition between rigid and flexible states. This adaptability is facilitated by advanced sensor technology and Artificial Intelligence (AI) systems, ensuring optimal wing positioning and flexibility. These distinct features position the Black

Nightmare V.7 as a groundbreaking innovation within the aviation industry.

Furthermore, the Black Nightmare V.7 operates autonomously, obviating the need for a human pilot. Its intricate control is managed entirely by the Full Autonomous Artificial Intelligence in attack or defence decisions making in military drones' system box, with human oversight from a ground-based pilot. The antenna system relies on satellite technology, guaranteeing superior reception and control. Therefore, this research project aims to introduce a revolutionary paradigm shift in both the design and functionality of this technology. The Black Nightmare V.7 represents a pioneering advancement that promises to redefine the capabilities and applications of UAVs. According to the full autonomous artificial intelligence in attack or defence decisions making in military drones' system box (The NeuronDrone-Box), we can observe an experimental case how 1,000,000 variables are running to build Fig. 6. The white colour shows logical and rational conditions and in black colour non-logical and irrational conditions, The final decision of attack or defence can define to shooting the final target after the exhausted evaluation of 1,000,000 variables, we are accounting the white colour of our graphs that represent 70% to take action of attack or defence in different strategic locations immediately. In this case, we printed in 3D Printer, to give a better view of our graph physically (see Fig. 12).

Fig. 12. The full autonomous artificial intelligence in attack or defence decisions making in military drones' System box (The NeuronDrone-Box).

5. Conclusion

In conclusion, this research presents a practical military tool is called the full autonomous artificial intelligence in attack or defense decisions making in military drones' system box (The NeuronDrone-Box) to generate national defense integrated systems. Its innovative design, of this special box incorporating features like the Critical Shotting Decision System (CSD-System), Multiple Ailerons System (MAS), Silent Propeller System (SPS), Sensibility Winds System (BSWS), Solar Panels for Efficient Energy Supply System (SPEES-System), and a versatile payload system for air-to-ground and air-to-sea assaults, marks a significant leap forward in UAV technology. The versatility of the full autonomous artificial intelligence in attack or defense decisions making in military drones' system box (The NeuronDrone-Box) and the Black Nightmare V.7 renders it invaluable for a wide array of military and national emergency missions, showcasing its boundless utility and potential impact on the industry. A conclusion section is not required. Although a conclusion may review the main points of the paper, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extensions.

Conflict of Interest

The author declares no conflict of interest.

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