

AI Surveillance and Management of Urban Seagulls in Coastal Cities

John Jennings¹

¹PhD TESOL. (for University of Galway Micro-Credential, The Futures of AI)

ARTICLE INFORMATION

Article history:

Published: October 2026

Keywords:

Artificial Intelligence
Seagulls
Cities
Environment
Case Study

ABSTRACT

The objective of this research is to highlight issues around seagull-human interactions. Then to discuss possible ways that AI could be used to reduce or intervene in conflict scenarios, and as an addendum to seagull human interactions there will be a brief examination of ways that this could further be developed for conservation for this protected species.

1. Introduction

With the growth of cities also comes a growth in population. Population growth can lead to more waste and litter in this environment. However, despite the issues with waste generally, there is also competition for this 'resource'. There are more humans and more waste, but there is also wildlife that likes to feed on garbage and leftover food.

Wildlife in cityscapes can vary from rats to ants to varying different species of bird. But, the most common feeder, in Galway city, is Seagulls. This can lead to a lot of issues, such as competition for the waste resource and also lead to complications such as injury to humans or indeed the Seagulls themselves. However, conflict between Seagulls and Humans could be reduced with the intervention of an Artificial Intelligence (AI) system.

2. Literature Review

In order to explain the issue reports in the media will be examined. Seagulls harassing people (Corrigan s 2024) and (O'Reilly A 2024) For the Case Study descriptions of Galway City Centre will be used (Wikipedia. Eyre Square). Current Solutions for the issue will be examined (Wicklow Pest Control 2025) Current technology which can be adapted will also be examined (Idra Technologies Bird Project 2025) (Jokiluhta M 2023)

3. Methodology

After examining Incidents. A case study will be introduced. A selected area of the city renowned for Seagull issues will be theoretically mapped. Then two possible scenarios will be introduced. The role of Artificial Intelligence (A.I) in these scenarios will be examined, and how it may be integrated into each scenario. The benefits of each system will be outlined. Current applications of A.I. in similar scenarios will be examined. Finally, issues around the public reception and future development will be posited.

4. Findings

4.1 Incidents

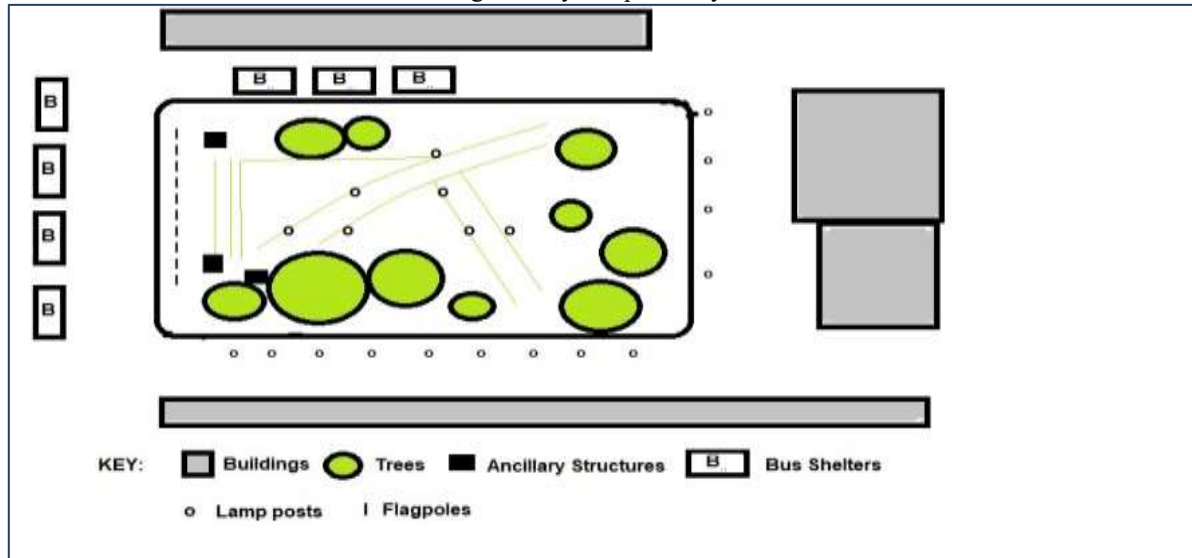
There have been some incidents involving human and seagull interactions such as people getting hurt or injured by seagulls when they are hungry or seeking food. Sometimes people are seen as a source of food, sometimes they are seen as competition for food. One example of this is in Galway city, where people were attacked for their food. Two women were attacked in Galway by Seagulls; this was attributed to poor waste disposal. (Corrigan S (2024)) In this scenario the main victims of the incident were the women who were injured. However, incidents involving interactions between seagulls and humans can also endanger the seagulls themselves. An example of this occurred in 2004, when during a GAA match, much to the shock of the audience and the participants, a disorientated seagull appeared on the pitch (O'Reilly A (2024)). While it is unclear whether the seagull was looking for food or had an injury, it would have been in a lot of danger if a passing ball or sliotar had hit it or indeed if a rowdy fan had negatively interacted with it. If there was some sort of AI warning system, these events may not have occurred.

4.2.1 Scenarios (Figures by author)

For the sake of simplicity, instead of trying to apply AI to every possible scenario. A sample scenario will be presented and then suggestions as to where and how AI could be used to deal with any negative consequences.

Scenarios will be set in Eyre Square Galway. This is a precise area of 3 acres (Wikipedia, Eyre Square. 2025) surrounded by buildings and it is renowned for having a strong seagull problem. In Eyre square it can be seen in the diagram below (Figure 1) that there is no shortage of places for Seagulls to perch.

Figure 1 Eyre Square Layout

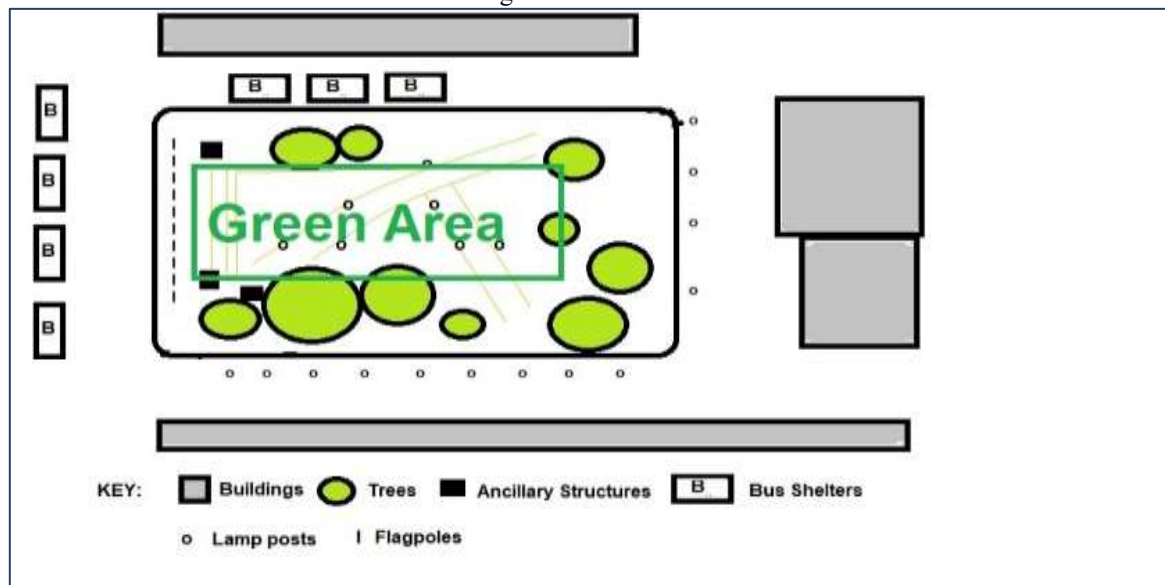


There are the following perching areas:

- Bus Shelters
- Flag posts
- Lampposts
- Buildings
- Trees
- Ancillary Structures

In the middle of this we will call the area where the Humans and Seagulls are most likely to interact the 'Green Area' See Figure 2.

Figure 2. Green Area



The above figures are the areas that will be referred to in the rest of the paper.

Scenario 1.

For our first scenario, we will take the example of a romantic couple in Galway. They go for a date and get hungry. Naturally, they go into a fast-food establishment and acquire some food. As it is a nice day, they decide to go to Eyre Square, into the Green Area. They begin to eat; however, they are suddenly surrounded by seagulls, waving their wings making noise. Some of the food is dropped to the ground in fright and some of the food is simply snatched from the couple's hands. The date is clearly over. The couple parts ways and tell everyone they know about the terrible encounter in Eyre Square. This along with any bystander's smartphone footage of the incident placed online, may have a detrimental effect on Eyre Square's reputation of a relaxing picnic spot or even on Galway's tourism industry.

Scenario 2.

This involves protecting seagulls. Seagulls in a human environment are seen as either a nuisance or a novelty. People may get annoyed at seagulls being noisy or taking food, this could lead to violence against the seagull, and it could be attacked or injured. Overfamiliarity with the Seagulls is another issue. When young children or students see the seagulls too often, they could approach these birds with amusement. This, however, could lead to situations where they are harassed by the public. This could lead again to Seagulls getting sick, injured, confused or disorientated.

Possible Solutions

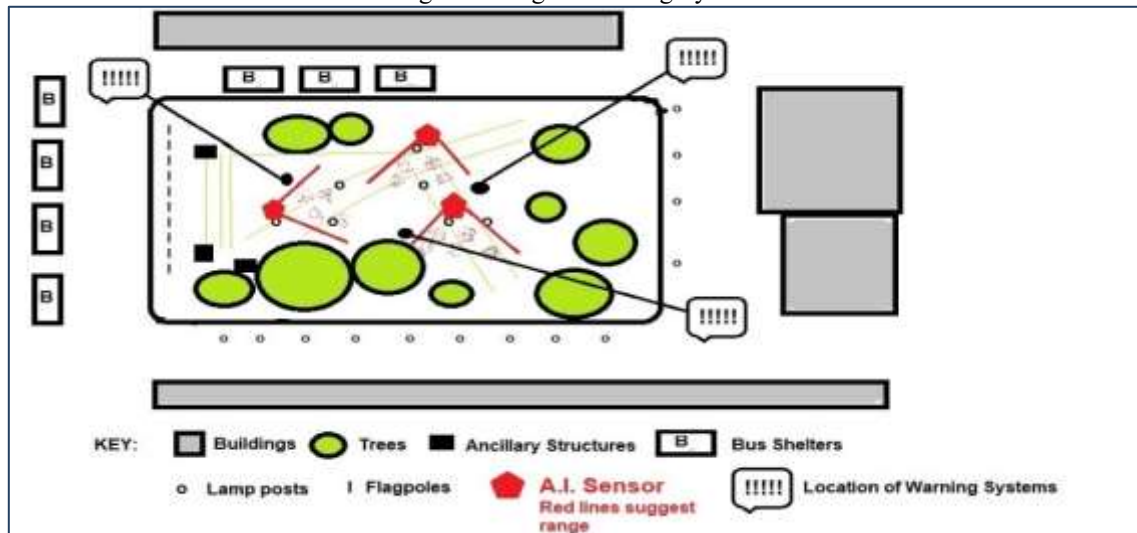
There are different solutions involving AI that could be implemented.

- A Seagull warning system
- A Seagull distraction system

4.2.2 Seagull Warning System

What would a seagull warning system involve? A seagull warning system would be linked to sensors around Eyre Square, possibly in areas known for Seagull Human Interactions in real time. On identifying a Seagull in close proximity to humans it would sound a harmless alarm from a warning system to scare the Seagulls away. See Figure 3 below:

Figure 3 Seagull Warning System



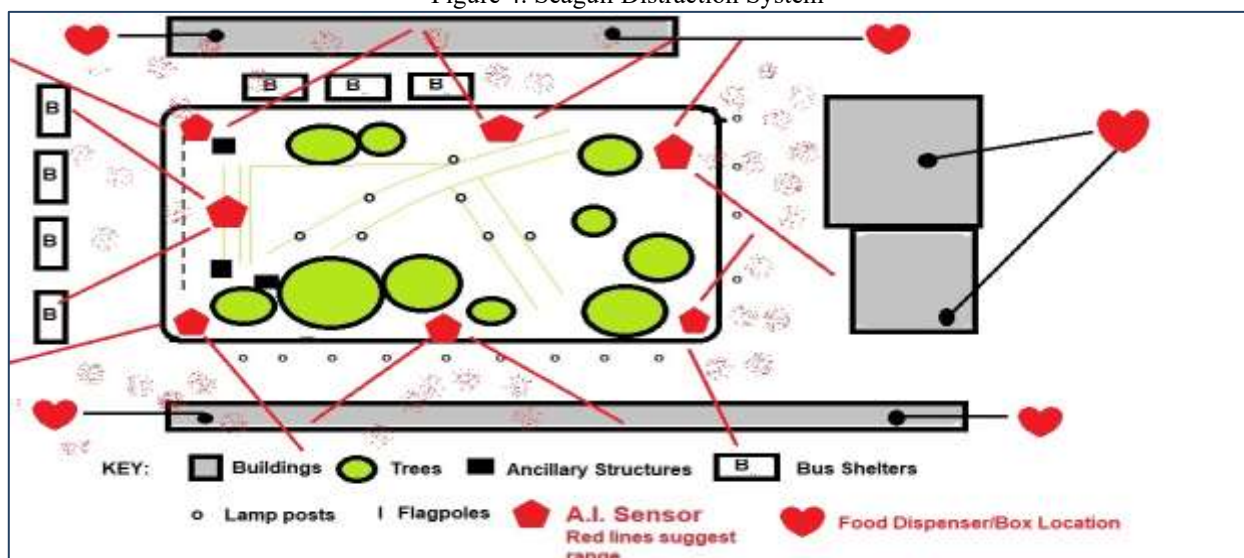
This system could also be adapted to warn the humans of approaching seagulls, however, it would have to be a subtle warning as it would defeat the purpose of the system if humans were more frightened of the alarm than the seagulls themselves, this may result in reduced footfall in the Square and could have a knock on affect for tourism in Galway in general.

4.2.3 Seagull Distraction System

Then there is the alternative idea of a Seagull Distraction System. What would a Seagull Distraction System involve?

The A.I. would once again be connected to sensors to prevent Seagull-Human interaction. However, these sensors may be higher up, as the aim would be to distract the Seagulls from the area, prior to them entering the Green Area. The A.I. would also be connected to specialised bird feeding containers on rooftops near the area. When the A.I. picks up a seagull the containers would open and distract the Seagulls preventing an interaction event. These systems would be facing entrance points to Eyre Square to have the Food Dispensers/Boxes active prior to the seagulls entering the Green Area. See Figure 4 below:

Figure 4. Seagull Distraction System



4.3.1 Role of A.I. in these systems.

The A.I. would have to be able to distinguish between Humans and Seagulls. It would have to be capable of recognizing the difference. However, given that Seagulls are basically one color, this makes it less complex. The seagull is white, and the humans have a basic humanoid shape and come in all different colors, textures and patterns. Also, the size and shape of the Seagull should

make it relatively easy for A.I. recognition tech to recognize it. Next, the A.I. would also have to glean distance and proximity. If the A.I. does not measure the distance properly then the system may activate when a seagull is over 50 foot away and nowhere near humans. Also, for the distraction system the AI will have to be able to measure longer distances and the possible approach route of the seagull, otherwise it may be opening the Food Dispenser/Boxes for birds who are out of range and are not coming anywhere near Eyre Square. The distraction system would require the A.I. to be linked to rooftop Food Dispensers/Boxes. This would require the AI to be able to recognize Seagull's proximity to Eyre Square and activate the distraction.

4.3.2 Possible Benefits

These warning and distraction systems could make it safer for humans to utilize the green space in Eyre Square. The Seagulls would also benefit as the Food Dispensers could be filled with food that is safe and nutritious for them to eat or seagull specific food. This would benefit the creatures much better than random human food which may not always be agreeable. From an environmental point of view, it would also make the streets a lot cleaner as rubbish bags and food consumption areas would not suffer from interference by seagulls.

4.4.1 Current Solutions

There are other methods of dealing with seagulls interacting with the human environment. Methods suggested by Pest Control Businesses vary. (Wicklow Pest Control 2025) There is placing nets around food in public. However, while this may sound practical, it would still not affect ants or rodents as they could easily crawl under nets, also if people are walking around eating food it would be difficult to put nets over them. Then we have bird spikes and wires which is basically placing spikes and barbed wires around food and food areas, this of course creates a risk of birds getting injured, not to mention the possibility of curious children and other wildlife getting hurt. Then there is falconry, which involves having a bird of prey scare or hunt the seagulls. This of course creates a risk of the falcon also getting hurt. However, there is also the use of an Ultrasonic device. The ultrasonic device (or a similar device) could be used in the Seagull warning system, discussed earlier, to scare the seagulls away when they are approaching humans. It would, however, need to be calibrated, so as not to confuse or disorientate the seagulls. (Wicklow Pest Control 2025)

4.4.2 Current uses of AI in this area.

Currently there are projects around wind turbines that use AI to protect birds. Irida Bird Project protects birds from wind turbines. They use AI to detect the proximity of birds. When a bird enters a 'Deterrence Zone' near the turbines it emits a harmless sound to deter the bird from entering the area. This could be adapted to create a deterrence zone around city spaces and protect humans. (Irida Technologies (2023)) There is another company called Silo A.I. they use AI to slow down the speed of wind turbines when birds are approaching, thus, guaranteeing them safe passage in the area Jokiluhta M (2023). The distraction system could use similar technology. Instead of slowing down wind turbines it could activate food boxes when they approach Eyre Square.

4.5.1 Reception of the Systems

On suggesting this system there may be a few legal hurdles to cross. The public would obviously have to be consulted, however, there could be competition to decide on the best alarm to warn humans, this would get the public involved and they would be invested in it. Also, the public may have concerns about possible health issues resulting to long term exposure to the sensors/scanners. The City Council would have to be consulted, as the system would require the placement of these sensors and exact placement in the Square. Residents may have concerns about lights flashing in their windows. This may lead to the system being used between certain hours of the day and being deactivated in the evening. As for the food dispensers, it is likely that the permission would have to be obtained from the building owners or businesses in the area. However, it could prove to be a positive initiative if the business were given a small conservation grant for helping the endangered seagull. There may also be some issues around the privacy of citizens. Some people may not appreciate being near a scan and may fear that the AI recognition may recognize them individually. These doubts could be mitigated by a demonstration of how the AI recognition software perceives humans in this scenario. There will probably be some debate as to who will refill the food dispensers and maintain the scanners. There may be some vandalism and mischief. However due to the conservation aspect of the project it is unlikely that there will be too much mischief.

4.5.2. Future Development

If the A.I. was placed in Eyre Square to warn and deter human-seagull interactions. The A.I. could also be adapted to monitor the seagull presence in and around the city for conservation purposes and possibly compile a data set of seagull behaviour. Over time the A.I could predict elements such as seasons, location, flight paths, temperature, wind speed which may lead seagulls to feed in Eyre Square in the first place. If the system works in Eyre Square, it could be used in other cities or areas. The data gleaned from the AI could be used to determine more suitable locations for scanners and possibly better sensors for similar projects.

5. Conclusion and Recommendations

There are a lot of incidents involving seagulls and Humans interacting. These incidents often result in negative scenarios. The negative scenarios for humans may involve loss of food. Injury or even psychological fear. However, it is not all about the Humans. Seagulls can also be negatively affected by these scenarios; they may be injured from an angry person who just had their food stolen or indeed they may be injured through overfamiliarity. This would include incidents of people being overfamiliar with the creatures and befriending them, however this may involve alcohol or young children trying to pet them, of course this may result in injury to the poor seagull. The motivation behind this is to avoid contact between humans and seagulls as much as possible. The simplest way is through different methods. Using the example of Eyre Square, it has been posited that interactions could be avoided in two ways. These two ways involve the use of sensors placed in Eyre Square to disrupt interactions in two different ways. The first one is a warning system. When the sensors pick up a seagull approaching a human in Eyre Square, it could set off an alarm, now this doesn't have to be a loud alarm or something frightening, just enough to scare away the seagull or possibly to warn the humans of approaching creatures.

In the examples shown in Research the technology already exist it is just a matter of adapting it to this scenario. In the future this could be adapted to other cities and also to other creatures. There are some issues around the Council, Privacy and who is responsible for the food boxes and maintaining the scanners, however with some organization and public consultation on the project, these issues could be easily dealt with.

References

- [1] Corrigan S (2024) Connacht Tribune. 'Two women need hospital treatment after being bitten by seagulls in separate incidents' Retrieved from <https://connachttribune.ie/two-women-need-hospital-treatment-after-being-bitten-by-seagulls-in-separate-incidents/> Accessed 02 March 2025.
- [2] Irida Technologies Bird Project (2023) <https://irida-tech.ai/bird-protect/> Accessed 05/03/2025.
- [3] Jennings J. (2025) The Seagull Conundrum. Retrieved from: <https://drjohnjennings.blogspot.com/2025/06/2025-public-interest-post-seagull.html> Accessed 20/08/2026
- [4] Jokiluhta M (2023) DHI and Silo AI build a computer vision application to protect endangered birds from Collision with wind turbines. <https://www.silo.ai/blog/dhi-and-silo-ai-collaboration> Accessed 03/03/2025
- [5] O'Reilly A (2024) Irish Examiner "Disoriented seagull seen during All-Ireland football final taken into care of wildlife experts" Retrieved from: <https://www.irishexaminer.com/news/arid-41445943.html> Accessed 02 March 2025
- [6] Wikipedia, Eyre Square 2025 https://en.wikipedia.org/wiki/Eyre_Square Accessed 02 March 2025
- [7] Wicklow Pest Control (2025) WicklowPestControl.ie 'The Hidden Dangers of Seagulls: Why Effective Control is Crucial for Health and Safety' Retrieved from: <https://wicklowpestcontrol.ie/the-hidden-dangers-of-seagulls/> Accessed 02 March 2025