**Automated Squirrel Feeding IOT System**

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**Automated Squirrel Feeding System**

The project, "Automated Squirrel Feeding IoT System," addresses the challenge of feeding neonatal squirrels and other small mammals raised by humans with species-specific and age-specific liquid formulas. Traditionally, this process has been manual and labor-intensive. However, this project aims to automate the process, offering convenience and precision in dispensing required amounts of liquid.

Flow diagram-

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# System description

It consists of a capacitive touch sensor for the detection of the squirrel(animal), when any animal approaches the sensor it detects the squirrel and sends the signal to the MCU, then based on the knob inputs for speed and volume, the system starts the stepper motor which allows the syringes to move, make the liquid(milk) dispensed from the outlet. There is an LCD to display the speed and volume inputs for each outlet for user reference When the squirrel moves away from the touch sensor it will stop the dispensing. There are switches for individual outlets so the user can turn off any motor.

### Conclusion

The development of the Automated Squirrel Feeding IoT System marks a significant advancement in the care and rehabilitation of neonatal squirrels and small mammals. By automating the feeding process, the system reduces the workload on caregivers while enhancing precision and efficiency. This innovation not only benefits rescued animals but also contributes to the overall welfare and conservation efforts for these species.

***Future Prospects***

Moving forward, there are several potential avenues for further enhancement and application of the Automated Squirrel Feeding IoT System. Integration with IoT technology could enable remote monitoring and control, allowing caregivers to manage feeding schedules and monitor consumption remotely. Additionally, advancements in sensor technology could facilitate real-time monitoring of the animal's health and nutritional intake, providing valuable insights for caregivers and veterinarians. Moreover, the scalability of the system could be explored to accommodate a wider range of small mammal species, expanding its utility in wildlife rehabilitation and conservation efforts. Overall, the project demonstrates the potential of IoT technology to improve animal care practices and contribute to the welfare of wildlife populations.

**References**

<https://ww1.microchip.com/downloads/aemDocuments/documents/OTH/ApplicationNotes/ApplicationNotes/TB3198_CVD_90003198A.pdf>