KONGU ENGIEERING COLLEGE

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PROJECT CATEGORY: SOFTWARE	SHREE NIKESH K G DHARSHINIPRIYA S K
PROJECT TITLE: MICRO DOPPLER BASED DRONE AND BIRD IDENTIFICATION SYSTEM	SRINITHI S SUBASRI A
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ABSTRACT

This project aims to distinguish between moving drones and birds using an ultrasonic sensor, an LCD, and an Arduino board by analyzing Doppler shift data. The ultrasonic sensor measures the distance of an object at two points in time, calculating its velocity based on the change in distance. The system then computes the Doppler shift, which is influenced by the object's velocity.

Drones and birds produce different Doppler shifts due to their distinct motion patterns—rotating propellers in drones and wing flaps in birds. By setting a velocity threshold and monitoring fluctuations in the Doppler shift, the system classifies the object as either a drone or a bird. The results are displayed on an LCD, providing real-time feedback on the object type and Doppler shift.

This cost-effective solution offers a practical method for distinguishing between drones and birds, addressing concerns in airspace security, wildlife monitoring, and surveillance, where such distinctions are critical. The integration of Doppler analysis with the Arduino platform offers flexibility and potential for further development.