(54) Title of the invention : DEVELOPING AN IOT-BASED FRAMEWORK TO DETER AND DETECT ANIMAL INTRUSION IN ADVANCED AGRICULTURAL PRACTICES

(51) International classification :G06N0020000000, G06Q0050020000, A61B0017000000, G06Q0010060000, G06N0005000000	(71)**Name of Applicant :** 1)**Dr.V.P.GLADIS PUSHARATHI** Address of Applicant :Professor, Dept Of CSE, Velammal Institute of technology, Chennai- Kolkata National highway, Panchetti, ponneri, Thiruvallur(DT)-601204 ----------- ----------- 2)**Ms.SHANTHA SHEELA** 3)**Ms. B.PAVITHRA** 4)**Ms. JOICE RUBY J** 5)**DUVVURU LAKSHMI LEKHANA** 6)**MALLISETTY SREEJA** 7)**ODURU CHARISHMA** 8)**G.KOUSHIK** 9)**JAGADEESAN.D** 10)**P.YASWANTH REDDY** Name of Applicant : NA Address of Applicant : NA (72)**Name of Inventor :** 1)**Dr.V.P.GLADIS PUSHARATHI** Address of Applicant :Professor, Dept Of CSE, Velammal Institute of technology, Chennai- Kolkata National highway, Panchetti, ponneri, Thiruvallur(DT)-601204 -- ----------- ----------- 2)**Ms.SHANTHA SHEELA** Address of Applicant :Assistant Professor, Dept Of CSE, Velammal Institute of technology, Chennai - Kolkata National highway, Panchetti, Ponneri, Tiruvallur(DT)-601204 ----------- ----------- 3)**Ms. B.PAVITHRA** Address of Applicant :Assistant Professor, Dept Of CSE, Velammal Institute of technology, Chennai - Kolkata National highway, Panchetti, Ponneri, Tiruvallur(DT)-601204 ----------- ----------- 4)**MS. JOICE RUBY J** Address of Applicant :Assistant Professor, Dept Of CSE, Velammal Institute of technology, Chennai - Kolkata National highway, Panchetti, Ponneri, Tiruvallur(DT)-601204 ----------- ----------- 5)**DUVVURU LAKSHMI LEKHANA** Address of Applicant :UG Scholar, Dept Of CSE, Velammal Institute of technology, Chennai- Kolkata National highway, Panchetti, ponneri, Thiruvallur(DT)-601204 ----------- ----------- 6)**MALLISETTY SREEJA** Address of Applicant :UG Scholar, Dept Of CSE, Velammal Institute of technology, Chennai- Kolkata National highway, Panchetti, ponneri, Thiruvallur(DT)-601204 ----------- ----------- 7)**ODURU CHARISHMA** Address of Applicant :UG Scholar, Dept Of CSE, Velammal Institute of technology, Chennai- Kolkata National highway, Panchetti, ponneri, Thiruvallur(DT)-601204 ----------- ----------- 8)**G.KOUSHIK** Address of Applicant :UG Scholar, Dept Of CSE, Velammal Institute of technology, Chennai- Kolkata National highway, Panchetti, ponneri, Thiruvallur(DT)-601204 ----------- ----------- 9)**JAGADEESAN.D** Address of Applicant :UG Scholar, Dept Of CSE, Velammal Institute of technology, Chennai- Kolkata National highway, Panchetti, ponneri, Thiruvallur(DT)-601204 ----------- ----------- 10)**P.YASWANTH REDDY** Address of Applicant :UG Scholar, Dept Of CSE, Velammal Institute of technology, Chennai- Kolkata National highway, Panchetti, ponneri, Thiruvallur(DT)-601204 ----------- ----------- 11)**Dr.V.P.GLADIS PUSHARATHI** Address of Applicant :Professor, Dept Of CSE, Velammal Institute of technology, Chennai- Kolkata National highway, Panchetti, ponneri, Thiruvallur(DT)-601204 -- ----------- ----------- 12)**Ms.SHANTHA SHEELA** Address of Applicant :Assistant Professor, Dept Of CSE, Velammal Institute of technology, Chennai - Kolkata National highway, Panchetti, Ponneri, Tiruvallur(DT)-601204 ----------- ----------- 13)**Ms. B.PAVITHRA** Address of Applicant :Assistant Professor, Dept Of CSE, Velammal Institute of technology, Chennai - Kolkata National highway, Panchetti, Ponneri, Tiruvallur(DT)-601204 ----------- ----------- 14)**Ms. JOICE RUBY J** Address of Applicant :Assistant Professor, Dept Of CSE, Velammal Institute of technology, Chennai - Kolkata National highway, Panchetti, Ponneri, Tiruvallur(DT)-601204 ----------- ----------- 15)**DUVVURU LAKSHMI LEKHANA** Address of Applicant :UG Scholar, Dept Of CSE, Velammal Institute of technology, Chennai- Kolkata National highway, Panchetti, ponneri, Thiruvallur(DT)-601204 ----------- ----------- 16)**MALLISETTY SREEJA** Address of Applicant :UG Scholar, Dept Of CSE, Velammal Institute of technology, Chennai- Kolkata National highway, Panchetti, ponneri, Thiruvallur(DT)-601204 ----------- ----------- 17)**ODURU CHARISHMA** Address of Applicant :UG Scholar, Dept Of CSE, Velammal Institute of technology, Chennai- Kolkata National highway, Panchetti, ponneri, Thiruvallur(DT)-601204 ----------- ----------- 18)**G.KOUSHIK** Address of Applicant :UG Scholar, Dept Of CSE, Velammal Institute of technology, Chennai- Kolkata National highway, Panchetti, ponneri, Thiruvallur(DT)-601204 ----------- ----------- 19)**JAGADEESAN.D** Address of Applicant :UG Scholar, Dept Of CSE, Velammal Institute of technology, Chennai- Kolkata National highway, Panchetti, ponneri, Thiruvallur(DT)-601204 ----------- ----------- 20)**P.YASWANTH REDDY** Address of Applicant :UG Scholar, Dept Of CSE, Velammal Institute of technology, Chennai- Kolkata National highway, Panchetti, ponneri, Thiruvallur(DT)-601204 ----------- -----------

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(57) Abstract :
This invention pertains to an innovative IoT-based framework developed to deter and detect animal intrusion in smart agriculture, addressing a pressing challenge faced by farmers worldwide. The framework comprises a network of strategically deployed sensor nodes equipped with various sensors, including motion detectors, infrared cameras, and acoustic sensors, to monitor animal activity across agricultural fields comprehensively. Data collected by these sensors is transmitted to a central control unit or cloud-based platform for real-time processing and analysis. Upon detection of intrusion events, alerts are promptly generated and transmitted to farmers or farm managers via multiple communication channels. Additionally, the framework incorporates deterrence mechanisms, such as automated sound or light devices and physical barriers, activated in response to detected intrusion events. Machine learning algorithms continuously analyze sensor data to improve detection accuracy and minimize false alarms over time. The user-friendly interface provides farmers with actionable insights for decision-making, enhancing farm security and productivity. Overall, this IoT-based framework represents a proactive approach to mitigating the impact of animal intrusion in smart agriculture, fostering sustainable farming practices and ensuring food security.

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