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(71)**Name of Applicant :**
**1)Dr. P. Deepan, St. Peter's Engineering College, Hyderabad**
Address of Applicant :Associate Professor, Department of Computer Science & Engineering , St. Peter's Engineering College, Maisammaguda, Hyderabad – 500100, Telangana, India. Hyderabad ---------- ----------
**2)Mrs. R. Vidya, B.S.Abdur Rahman Crescent Institute of Science and Technology,Chennai**
**3)Mr. N. Arul, St. Peter's Engineering College, Hyderabad**
**4)Dr. B. Rajalingam, St. Martin's Engineering College**
**5)Dr. R. Santhoshkumar, St. Martin's Engineering College**
**6)Dr. N. Satheesh, School of Engineering & Technology, Jain Global Campus, Jain (Deemed to be University)**
**7)Mrs. A. Sivaranjani, Teaching Fellow, University College of Engineering, Panruti**
**8)Mr. D. Vijayakumar, Dhanalakshmi Srinivasan Engineering College**
**9)Mr. R. Senthil Babu, St. Peter's Engineering College**
**10)Mrs. S. Dhiravidaselvi, Roever Engineering College**
**11)Mr. N. Rajadurai, St. Peter's Engineering College**
**Name of Applicant : NA**
**Address of Applicant : NA**
(72)**Name of Inventor :**
**1)Dr. P. Deepan, St. Peter's Engineering College, Hyderabad**
Address of Applicant :Associate Professor, Department of Computer Science & Engineering , St. Peter's Engineering College, Maisammaguda, Hyderabad – 500100, Telangana, India. Hyderabad ---------- ----------
**2)Mrs. R. Vidya, B.S.Abdur Rahman Crescent Institute of Science and Technology,Chennai**
Address of Applicant :Research Scholar, Department of Information Technology, B.S.Abdur Rahman Crescent Institute of Science and Technology, Vandalur, Chennai 600 048. Chennai ---------- ----------
**3)Mr. N. Arul, St. Peter's Engineering College, Hyderabad**
Address of Applicant :Assistant Professor, Department of Computer Science & Engineering , St. Peter's Engineering College, Maisammaguda, Hyderabad – 500100, Telangana, India. Hyderabad ---------- ----------
**4)Dr. B. Rajalingam, St. Martin's Engineering College**
Address of Applicant :Associate Professor, Department of Computer Science and Engineering, St. Martin's Engineering College, Dhulapally, Secunderabad – 500100, Telangana, India. Secunderabad ---------- ----------
**5)Dr. R. Santhoshkumar, St. Martin's Engineering College**
Address of Applicant :Associate Professor, Department of Computer Science and Engineering, St. Martin's Engineering College, Dhulapally, Secunderabad – 500100, Telangana India. Secunderabad ---------- ----------
**6)Dr. N. Satheesh, School of Engineering & Technology, Jain Global Campus, Jain (Deemed to be University)**
Address of Applicant :Professor, Computer Science and Engineering (Artificial Intelligence), School of Engineering & Technology, Jain Global Campus, Jain (Deemed to be University), Kanakapura Road, Bangalore. Bangalore ---------- ----------
**7)Mrs. A. Sivaranjani, Teaching Fellow, University College of Engineering, Panruti**
Address of Applicant :Teaching Fellow, University College of Engineering, Panruti, Cuddalore, Tamil Nadu 607106 Panruti ---------- ----------
**8)Mr. D. Vijayakumar, Dhanalakshmi Srinivasan Engineering College**
Address of Applicant :Assistant Professor, Department of Information Technology, Dhanalakshmi Srinivasan Engineering College, Perambalur- 621212 Perambalur ---------- ----------
**9)Mr. R. Senthil Babu, St. Peter's Engineering College**
Address of Applicant :Assistant Professor, Department of Computer Science & Engineering (AIML), St. Peter's Engineering College, Maisammaguda, Hyderabad – 500100, Telangana, India. Hyderabad ---------- ----------
**10)Mrs. S. Dhiravidaselvi, Roever Engineering College**
Address of Applicant :PG Scholar, Department of CSE, Roever Engineering College, Perambalur- 621212 Perambalur ---------- ----------
**11)Mr. N. Rajadurai, St. Peter's Engineering College**
Address of Applicant :Assistant Professor, Department of Computer Science & Engineering, St. Peter's Engineering College, Maisammaguda, Hyderabad – 500100, Telangana, India Hyderabad ---------- ----------

(57) Abstract :
The whole world is turning into automation. All corporate, government, and public sectors are integrating automation into their respective domains to enhance productivity. Farming is a major sector where the need and demand for automation are widely open. Most countries started implementing and providing smart farming solutions. In this proposed work, smart poultry farming which is an integral part of farming is concentrated and a novel prototype is designed. In India, several farmers own poultry farms, but the productivity, sustainability, efficiency, and animal welfare are not satisfactory. Hence, integrating advanced technologies like Artificial Intelligence (AI), Internet of Things (IoT) sensors, and Robotics results in profitable and sustainable farming. IoT sensors for various aspects like Temperature sensors, Humidity sensors (DTH11), Lighting sensors (LDR), Air quality sensors (MG135), Camera sensors, Thermal camera sensors, Water quality sensors (pH), and GSM modules are integrated into this prototype. The developed automation system assists in manpower reduction, monitoring the bird's health, optimized resource utilization, and results in overall enhanced productivity. This kind of AI-IoT-assisted smart system for poultry farming will support the farmers to overcome several challenges and successfully run the poultry farm.

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