Two Fully Funded Ph.D. Student Positions in AI and Robotics for Precision Livestock Farming

POSITION DESCRIPTION

Dr. Ramesh Bahadur Bist's **Artificial Intelligence and Robotics (AIR) Lab** in the Department of Biological and Agricultural Engineering at North Carolina State University has openings for **two fully funded Ph.D. positions**. Highly motivated candidates are encouraged to apply. Prospective Ph.D. students will engage in **research on artificial intelligence, robotics, machine vision, infectious disease mathematical modeling, and automation for precision livestock farming applications.** The anticipated start date is Spring 2026, Fall 2026, or Spring 2027. The minimum stipend will be $33,000/year plus tuition coverage, health insurance, and travel funding for conference attendance. The stipend is eligible for annual increases based on strong academic performance and research achievements.

QUALIFICATIONS AND REQUIRED SKILLS

- B.S. /M.S. in Agricultural Engineering, Computer Engineering, Electrical Engineering, Mechanical Engineering, or other closely related disciplines.
- Experience or interest in at least two of the following areas:
  - Robotics, control systems, or autonomous navigation.
  - Familiarity with ROS, embedded systems, or robotic simulation tools.
  - 2D/3D Computer vision, machine learning, deep learning, and AI frameworks (TensorFlow, PyTorch, OpenCV, etc.).
  - Experience in multispectral/hyperspectral imaging or LiDAR data processing is a plus.
  - Multi-scale mathematical modeling, spatial analysis and/or network analysis.
- Strong programming skills (e.g., C/C++, Python, R-studio, MATLAB).
- Strong oral and written communication skills.
- Experience in handling large datasets and running robust quantitative analysis.
- Demonstrated publication or conference presentation record.
- Knowledge of Livestock, such as poultry, swine, cattle, and other small ruminants.

HOW TO APPLY

If you are interested in these positions, please **email your CV and research statement** to Dr. Ramesh Bahadur Bist at rbbist@ncsu.edu. *Use the subject line: Prospective PhD Application – Firstname Lastname.* Please note that applicants are required to submit a full application through the graduate admissions portal. The final decision will be made by the graduate office. More information about the application and admission process can be found at https://grad.ncsu.edu/admissions/. Information about BAE department is available at https://bae.ncsu.edu/.

ABOUT NCSU

NC State University is a public land-grant research university in Raleigh, North Carolina. Together with Duke University in Durham and the University of North Carolina at Chapel Hill, it forms one of the corners of the Research Triangle. It is classified among "***R1: Doctoral Universities***—Very high research activity." In the **2024 U.S. News & World Report rankings**, NC State University ranked **#58 among Best National Universities, #25 among Best Engineering Schools**, and **#3 for Best Biological and Agricultural Engineering** Programs. Additionally, NC State is ranked **#5 globally in Computer and Electrical Engineering** according to the 2024 Shanghai Rankings. Additionally, Raleigh, NC was ranked #2 in Best Places to Live in the U.S.