PROJECT OVERVIEW REPORT

1. UTC Identifying Number
   69A3551847102

2. Center Identifying Number
   CAIT-UTC-REG54

3. Project Title
   Rotorcraft Landing Sites Identification – Scaling and Generalization of the AI Model

4. Principal Investigator & Contact Information
   Ghulam Rasool, Ph.D.
   Assistant Professor
   Rowan University
   201 Mullica Hill Rd
   Glassboro, NJ 08028

5. Rutgers/CAIT Project Manager
   Patrick Szary, Ph.D.

6. Customer Principal
   Charles (Cliff) Johnson, Research Lead
   Rotorcraft, Unmanned Aircraft Systems (UAS), and eVTOL/Urban Air Mobility System Safety Section, ANG-E272 Aviation Research Division NextGen WJHTC Office
   William J. Hughes Technical Center
   Atlantic City International Airport, NJ 08405

7. Project Description
   The primary goal of this proposal is to address the challenging problem of automatic identification of helipads and landing sites using the machine and deep learning algorithms. This project's deliverable is an AI-based system for the identification of helipads, heliports, and landing site infrastructure from satellite images.

8. Implementation of Research Outcomes (or why not implemented)
   The intended outcome of the AI model is to automate the process of identification of landing sites for rotorcrafts from the Google Earth satellite imagery. This system is expected to achieve landing site identification accuracy equal to or higher than that of a trained human operator at a fraction of time and resources. Once developed, the AI system would allow the FAA to regularly update its databases without delays and, as a result, the databases of FAA could be used

by any mission, including "Helicopter Air Ambulance missions to rural communities."

9. Impacts/Benefits of Implementation (actual, not anticipated)
    To Be Determined

10. Dates and Budget
    Start date: 3/1/2021
    End date: 2/28/2022
    UTC (CAIT) Dollars: $60,000
    Cost Sharing: $60,846
    Total Dollars: $120,846

11. Keywords
    Heliport, aircraft, neural networks, machine learning, artificial intelligence, detection, computer vision

12. Web Links (Reports and Project Website)
    https://cait.rutgers.edu/research/rotorcraft-landing-sites-identification-scaling-and-generalization-of-the-ai-model/