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Department of Artificial Intelligence and Data Science

NAAN MUDHALVAN -INTERNET OF THINGS

PROJECT TITLE : ENVIRONMENTAL MONITORING IN PARKS

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ENVIRONMENTAL MONITORING IN PARKS

PROBLEM STATEMENT:

Design an integrated environmental monitoring system for parks and natural reserves to track and analyze key environmental parameters, including air and water quality, wildlife population dynamics, weather patterns, and soil health, with a focus on enhancing conservation efforts, ensuring visitor safety, and promoting sustainable management practices.

DESIGN THINKING :

Design Thinking Approach for an Integrated Environmental Monitoring System for Parks and Natural Reserves:

1. Empathize:

- Begin by understanding the diverse stakeholders involved: park managers, conservationists, park visitors, and local communities.
- Conduct interviews, surveys, and workshops to gain insights into their needs, concerns, and expectations related to environmental monitoring in parks.

2. Define:

- Clearly define the problem statement and the specific goals of the integrated monitoring system.
- Prioritize objectives such as conservation, safety, and sustainability, and consider potential trade-offs.

3. Ideate:

- Organize brainstorming sessions with a multidisciplinary team to generate innovative ideas for monitoring solutions.

- Explore technologies like IoT sensors, satellite imagery, drones, and data analytics to collect and process environmental data.

4. Prototype:

- Develop a low-fidelity prototype or mockup of the monitoring system to visualize its components and how they will interact.
- Experiment with different sensor types, data transmission methods, and data visualization tools.

5. Test:

- Conduct field tests and simulations to assess the prototype's functionality and usability.
- Gather feedback from potential users and stakeholders to refine the system's design based on real-world insight