Robotics,
Autonomous systems

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RubbleScout,

"Navigating Chaos, Saving Lives"

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Objectives:

- Begin the exploration of NVIDIA Jetson Nano capabilities.
- Experiment with AI models using a camera module.

Activities Undertaken:

1. Jetson Nano Setup:
  - Initialized the Jetson Nano development kit, setting up the necessary operating system and drivers.
  - Familiarized with the software environment and available resources/documentation provided by NVIDIA.

2. AI Experimentation:
  - Connected a camera module to the Jetson Nano and ran sample AI programs to gauge the processing capabilities.
  - Explored basic object detection and image processing functionalities as preliminary tests for potential search and rescue applications.

Results and Observations:

- Jetson Nano Familiarization: Successfully set up the Jetson Nano and began exploring its extensive AI capabilities, noting the ease of use and powerful processing potential.

- AI Model Testing: Initial AI tests with the camera module demonstrated the Jetson Nano's ability to handle real-time data analysis, a promising feature for integrating AI into RubbleScout's systems.

Next Steps:

- Deep Learning Integration: Plan more advanced tests using deep learning models tailored for object recognition and environmental analysis relevant to search and rescue scenarios.

- Real-World Testing: Implement the AI functionalities in more practical, real-world conditions to test their reliability and accuracy.

- Performance Benchmarking: Assess the Jetson Nano's performance benchmarks in various operational settings to ensure it meets the project's requirements.

Reflections:

This session marked the beginning of a pivotal phase in the RubbleScout project, delving into the capabilities of the NVIDIA Jetson Nano. The potential to enhance RubbleScout with AI-driven features promises a significant leap forward in its development. As the project moves into more complex AI implementations, the insights gained from this session will serve as a valuable foundation for future advancements.