

Lucidia: AI-Based Dementia and Alzheimer's Support Systems

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Abstract:

Lucidia is a smart system designed to help people who are suffering from Alzheimer's disease and dementia. These patients often forget things, feel confused, and may even get lost, which makes daily life difficult for them and stressful for their caregivers. Most existing solutions only focus on one feature, like reminders or tracking, and do not provide complete support in one place. To solve this problem, Lucidia combines Artificial Intelligence (AI) and Internet of Things (IoT) technologies to create an all-in-one support system. It uses devices like GPS for location tracking, cameras for face recognition, and voice systems to give reminders for daily tasks such as taking medicine. The system can also recognize familiar people, monitor patient behaviour, and detect unusual situations like wandering or inactivity. If any problem is detected, it immediately sends alerts to caregivers so they can take quick action. The system mainly supports two users patients and caregivers. Patients get continuous help in their daily life, while caregivers can easily monitor them and receive updates through a simple interface. Overall, Lucidia helps improve patient safety, supports independent living, and reduces the burden on caregivers. The system is practical, reliable, and can be used in real-life healthcare situations.

Keywords:

Artificial Intelligence, IoT, Alzheimer's Disease, Dementia Care, Face Recognition, GPS Tracking, Voice Reminders, Patient Monitoring, Caregiver Support, Smart Healthcare.