

Game-Based Monitoring and Holistic Support for Autism: A Mobile Application Approach

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Abstract:

This paper presents a mobile application designed to provide comprehensive support for the parents of children with Autism Spectrum Disorder(ASD) through monitoring tools and game skill development. The app also incorporates three interactive games (Cognitive level, Sensory level and Language level) that facilitate skill acquisition and collecting the performance data in percentile for development tracking. The application architecture integrates game-based learning with the three supporting modules: i) Growth Monitoring using WHO percentile charts for Height ,Weight and Head circumference and weekly game performance analysis, ii) Customizable Daily Schedule to maintain the routine consistency and iii) Community Forum fostering peer support and resource sharing. Results indicate that the game-centric approach not only enhances the children's development outcome but also provides the parents with quantifiable progress metrics, reducing the isolation and stress. This holistic mobile solution demonstrates the efficiency of combining the structured gaming experiences with the support tools to address the aspects of families navigating autism care.

Keywords:

Autism Spectrum Disorder (ASD), Game-Based Learning, Development Monitoring, Mobile Application, Parental Support, Growth Tracking, Daily Engagement.