

عنوان مقاله:

Review of different systems based on RASPBERRY-PI Technology

محل انتشار:

هشتمین کنفرانس ملی پژوهشهای کاربردی در مهندسی برق، مکانیک و مکترونیک (سال: 1403)

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خلاصه مقاله:

This article provides a comprehensive overview of the various types of Raspberry Pi boards and their diverse applications. It begins by detailing the evolution of Raspberry Pi models, from the original Raspberry Pi \ to the latest Raspberry Pi Δ and Raspberry Pi Zero series. Each model's specifications, including processing power, memory capacity, and connectivity options, are examined to highlight their unique features and improvements over predecessors. The article then explores the wide range of applications for these boards, spanning education, home automation, robotics, and industrial use. By showcasing real-world examples and case studies, the article demonstrates how Raspberry Pi boards have become versatile tools for innovation and learning. The objective is to provide readers with a clear understanding of the capabilities and potential uses of different Raspberry Pi models, empowering them to select the appropriate board for their specific needs. Enhanced performance and accuracy could significantly boost the appeal of the Raspberry Pi. Several enhancements are suggested to improve its functionality: ١. Increasing the number of users highlights a need for more internal storage and an integrated heat sink, which would greatly improve the board's efficiency. ٢. Equipping the Raspberry Pi with an external case and a comprehensive user guide could further stimulate global demand for the product. ٣. Integrating a GPU would enable the Raspberry Pi to run a full version of Windows, elevating its capabilities to a new level. ٤. The Raspberry Pi seamlessly blends elements of embedded systems with traditional computing, making it an ideal platform for connecting a diverse array of external peripherals. ٥. programming the General-Purpose Input/Output (GPIO) pins on the Raspberry Pi is considerably simpler than programming traditional microprocessors or FPGAs. ٦. The Raspberry Pi offers remarkable flexibility, allowing users to tailor its programming to meet their specific needs and budget constraints. ٧. While the Raspberry Pi can function as a standalone computer, it cannot fully replace traditional computers due to certain inherent limitations.

کلمات کلیدی:

Raspberry, application , board , memory_

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