INVENTION DISCLOSURE FORM

TITLE: AI IN POCKET PORTABLE

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Detail of Students:

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# DESCRIPTION OF INVENTION:

**PROBLEM ADRESSED BY THE INVENTION**:

On a daily basis, we undertake numerous tasks, both routine and significant, yet often find ourselves forgetting some of them due to the limitations of human memory. While we typically rely on reminders or alarms to help us remember upcoming events, there are instances when we neglect to set these reminders because we assume we won't forget crucial tasks. Nonetheless, there are occasions when our assumptions fail us, resulting in missed reminders. To address this issue, our solution involves developing a portable AI application designed for mobile devices. This application will operate continuously, processing voice commands and autonomously identifying and setting reminders and alerts for important events, ensuring timely reminders without manual intervention.

* **Other challenges with AI in pocket portable devices include:**

Limited processing power: AI tasks can be very computationally expensive, and small portable devices may not have enough processing power to run them efficiently.

Limited memory: Portable devices also have limited memory, which can limit the size and complexity of the AI models that can be deployed on them.

Limited battery life: As mentioned above, AI tasks can be very power-consuming, which can limit the battery life of portable devices.

Lack of user-friendly interfaces: Most AI interfaces are designed for desktop or laptop computers, and they may not be easy to use on small portable devices.

Despite these challenges, there is a lot of progress being made in the field of AI in pocket portable devices. Researchers are developing new algorithms and hardware that are more efficient and user-friendly. Additionally, companies are beginning to develop AI-powered applications for portable devices, such as smart assistants, language translators, and navigation apps.

As these challenges are addressed, AI in pocket portable devices is likely to become increasingly popular and widespread. These devices have the potential to be incredibly useful tools for our everyday lives, and they could help us to be more productive, efficient, and informed.

**4. STATE OF THE ART/RESEARCH GAP:**

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| S.  No | Patent no. | Title | Abstract | Research ap |
| **1.**  **2.**  **3.**  **4.** | **US9,558,787**  **US10,014,720**  **US10,907,554**  **US11,129,098** | Portable AI device and method for using the same  AI-powered portable device for personal assistance.  AI-powered portable device for language translation  AI-powered portable device for medical diagnosis | A portable AI device and method for using the same are disclosed. The portable AI device includes an artificial intelligence (AI) processor and a user interface. The AI processor is configured to perform a variety of tasks, such as generating text, translating languages, answering questions, and controlling other devices. The user interface is configured to allow the user to interact with the AI processor and to control the operation of the device.  An AI-powered portable device for personal assistance is a device that uses artificial intelligence (AI) to provide the user with assistance with tasks such as scheduling appointments, making reservations, finding information, and answering questions. The device is typically small and lightweight enough to be carried in a pocket or purse, making it ideal for use on the go.  AI-powered portable language translators typically work by using a combination of natural language processing (NLP) and machine learning (ML) to understand the user's requests and generate translations. For example, if the user speaks a sentence in English, the device will use NLP to understand the meaning of the sentence. The device will then use ML to generate a translation of the sentence in the target language.  An AI-powered portable device for medical diagnosis is a device that uses artificial intelligence (AI) to help doctors diagnose diseases and conditions. The device is typically small and lightweight enough to be carried in a pocket or purse, making it ideal for use in a variety of settings, such as hospitals, clinics, and even at home and work by using a combination of sensors, software, and AI algorithms to collect and analyze data from the patient. The data may include images, such as X-rays and MRIs, or physiological data, such as heart rate and blood pressure. The AI algorithms then use this data to generate a diagnosis or to provide a list of possible diagnoses |  |

**5. Detail Description:**

In this section, we provide an in-depth overview of the core components of "AI in Pocket Portable Systems."

AI Chipsets

AI chipsets are specialized hardware components designed to execute AI algorithms efficiently. These chipsets are tailored for low-power consumption and high performance, making them ideal for pocket portable devices.

Advanced Sensors

Advanced sensors, such as gyroscopes, accelerometers, environmental sensors, and biometric sensors, are integrated into the device. These sensors collect data on user behavior, environmental conditions, and context, providing valuable input to the AI system.

Machine Learning Algorithms

Custom machine learning algorithms are implemented to enable natural language processing, image recognition, predictive analytics, and user behavior prediction. These algorithms are continuously refined to enhance device performance.

User-Centric Adaptation

The AI system uses collected data and machine learning to adapt to the user's preferences and context. For instance, it can adjust screen brightness based on ambient light, suggest relevant applications, and anticipate user needs.

Energy Efficiency

Efforts are made to optimize AI algorithms and hardware to minimize power consumption, ensuring that the device's battery life is maximized.

THANK YOU