i-SPiKE 2023

INTERNATIONAL EXHIBITION & SYMPOSIUM ON PRODUCTIVITY, INNOVATION, KNOWLEDGE & EDUCATION

"Optimizing Innovation in Knowledge, Education and Design"

EXTENDED ABSTRACT

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Assalamualaikum warahmatullahi wabarakatuh,

First and foremost, I would like to express my gratitude to the organizing committee of i-Spike 2023 for their tremendous efforts in bringing this online competition a reality . I must extend my congratulations to the committee for successfully delivering on their promise to make i-Spike 2023 a meaningful event for academics worldwide.

The theme for this event, 'Optimizing Innovation in Knowledge, Education, and Design,' is both timely and highly relevant in today's world, especially at the tertiary level. Innovation plays a central role in our daily lives, offering new solutions for products, processes, and services By adopting a strategic approach to 'Optimizing Innovation in Knowledge, Education, and Design,' we have the potential to enhance support for learners and educators, while also expanding opportunities for learner engagement, interactivity, and access to education.

I am awed by the magnitude and multitude of participants in this competition. I am also confident that all the innovations presented have provided valuable insights into the significance of innovative and advanced teaching materials in promoting sustainable development for the betterment of teaching and learning. Hopefully, this will mark the beginning of a long series of i-Spike events in the future.

It is also my hope that you find i-Spike 2023 to be an excellent platform for learning, sharing, and collaboration. Once again, I want to thank all the committee members of i-Spike 2023 for their hard work in making this event a reality I would also like to extend my congratulations to all the winners, and I hope that each of you will successfully achieve your intended goals through your participation in this competition.

Professor Dr. Roshima Haji Said
RECTOR
UiTM KEDAH BRANCH

WELCOME MESSAGE (i-SPiKE 2023 CHAIR)

We are looking forward to welcoming you to the 3rd International Exhibition & Symposium on Productivity, Innovation, Knowledge, and Education 2023 (i-SPiKE 2023). Your presence here is a clear, crystal-clear testimony to the importance you place on the research and innovation arena. The theme of this year's Innovation is "*Optimizing Innovation in Knowledge, Education, & Design*". We believe that the presentations by the distinguished innovators will contribute immensely to a deeper understanding of the current issues in relation to the theme.

i-SPiKE 2023 offers a platform for nurturing the next generation of innovators and fostering cutting-edge innovations at the crossroads of collaboration, creativity, and enthusiasm. We enthusiastically welcome junior and young inventors from schools and universities, as well as local and foreign academicians and industry professionals, to showcase their innovative products and engage in knowledge sharing. All submissions have been rigorously evaluated by expert juries comprising professionals from both industry and academia.

On behalf of the conference organisers, I would like to extend our sincere thanks for your participation, and we hope you enjoy the event. A special note of appreciation goes out to all the committee members of i-SPiKE 2023; your dedication and hard work are greatly appreciated.

Dr. Junaida Ismail
Chair
3rdInternational Exhibition & Symposium Productivity, Innovation, Knowledge, and Education 2023 (i-SPiKE 2023)

MAYA (SMART MIRROR)

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ABSTRACT

The history of mirrors starts from Justus von Liebig, who invented modern mirrors in Germany in 1835. Yet, mirrors had actually been used in Turkey approximately 8000 years ago, used in Iraq and Egyptwhere the mirrors were made of copper. Nowadays, mirrors have been part of human needs. People use mirrors daily for their appearance especially when there is an event that requires them to go out of theirhouse. This could help a certain group of people to find a solution in their daily routine. They show us what we look like, they let us examine ourselves, and they can give us a glimpse of our ancestry and heritage. Sometimes a mirror will show us a part of ourselves that we did not notice before, and there is beauty in that. Maya is the best to find the best ingredients that are suitable for their skin type and skin concern. By this, people will be interested to invest in the smart mirror since the function of it will literally help them to solve some of their problems. Smart mirror's users will not have to worry anymore about their hesitation with their skin, hair and cosmetics problems after using our smart mirror. Six types of functions provided with the smart mirror will give the best experience for the users that reallyhelp them to cope with their life.

Keywords: Beauty, Smart mirror, Skin concern, Lifestyle

INTRODUCTION

Smart mirror is the product that we are improving that relates to our lifestyle. Maya is a highly integrated smart mirror that uses electric power as the source of power. It's a two-way mirror that reflects light from one direction but allows light to pass through another direction. The five functions that are available in our product are skin analysis, hair analysis, weather, speaker and light-emitting diode (LED). The skin analysis function examines skin problems and undertone skin for their users. Other than that, hair care, hair problem and hair type are one of the hair analysis results. Not only that, Maya also can detect the weather and the temperature of theday. A built- in speaker makes it simpler for you to enjoy listening to your favorite podcasts or music. This mirror is equipped with a light-emitting diode (LED) and a digital display behind the mirror that can be connected using Bluetooth or WiFi. It comes in two shapes which are circle and arch. The size of the smart mirror is (40cm x 40cm) for a round-shaped mirror and (40cm x 50 cm) for an arched-shaped mirror. Meanwhile, the price range for each is RM499 - RM600 (round-shaped mirror) and RM699 - RM800 (arched-shaped mirror). Besides,the smart mirror uses plug in electric power to support all the functions.

OBJECTIVE

Maya is a smart mirror consisting of a mirror combined with AI technology. The objective of Maya is to help a certain group of people to find a solution in their daily routine. Maya is more focused on beauty. Maya is really convenient to the beautician and people who care about their self-beauty. Maya is an AI technology that can help beauticians or users to find solutions based on the problem that they faced. For example, when they have problems with their acne skin, they can use Maya to find the best ingredients that are suitable for their skin type and skin concern. Maya is a technology that makes it easier and faster to get a solution in beauty.

NOVELTY

Maya provides a variety of features. The main features of Maya are skin concerns. Users can find out about what is the problem with their skin. Users also can know their type of skin. Maya helps users to solve the problem that they faced according to their skin type and skin concern. Users also can know their skin undertone such as tan, neutral, and fair undertone. From skin undertone discovered, they will know what is the right shade in choosing makeup tools such as foundation, lipstick, eyeshadow, and blusher. There is also a weather display on the mirror.In addition, Maya can help users with their hair care. Using Maya, users can discover their hair type. Users will know what is the best hair routine based on their hair type. Maya also has speaker features as an entertainment to users. The design used can save space. Maya is connected to wifi to make sure all the features work well. Maya also saves electricity. Maya also has a warranty. So, users will not suffer losses if there is a problem with Hi Maya.

PRACTICALITY & USEFULNESS

Maya is a smart mirror that is available in round and arch shapes. It is made of a plane mirror and a stainless-steel frame. The mirror has a touch screen that is powered by Raspberry Pi OS software. It also has speakers, Bluetooth, and Wi-Fi connectivity. The weather app on Maya uses WeatherBug to provide current, hourly, and 10-day forecasts, as well as pollen levels and storm alerts.

Maya has LED lights that can be changed to a variety of colors. The color can also be changed via a mobile phone. Maya can be mounted on the wall using a French cleat.

Maya is equipped with Visia Skin Analysis software to measure skin porphyrin levels, pore size, skin pigment, wrinkles, texture, UV spots, and sun damage. It can also detect the user's correct skin tone to find suitable makeup colors.

Maya uses DermoBella Hair2 software for hair care analysis. This software measures the hair, scalp, and skin to provide personalized recommendations for hair care products and treatments.

Overall, Maya is a versatile and feature-rich smart mirror that can be used for a variety of purposes, including checking the weather, getting makeup advice, and tracking skin health.

COMMERCIALIZATION POTENTIAL

Maya has the potential to be commercialized in the market. Before that, it has to be advertised and let people all around the world know about our product's existence. As the innovator for Maya, there are a few ways to advertise our innovation product. Firstly, if we want to let the world know about it, we have to use the power of social media. By creating Facebook, Instagram, Twitter, Tiktok and any other social media that our product will have the exposure. Next, we have to apply and pay for Google ads and social media ads. This way is among the fastest ways to expose our product to the target audience quickly. When the audience receives the advertisement by google and social media application, they will be more attracted to read about it. Other than that, we can try to sell it on online shopping platforms. For instance, Shopee, Lazada and Amazon. Nowadays, most people enjoy making internet purchases. With this, we have the opportunity to grab and commercialize smart mirrors on the online shopping platforms. Furthermore, Maya is more expensive than the normal mirror since our smart mirror has so many functions by using AI for daily use. Our target buyer is 80% women and only 20% men. This is because women are more attracted to beauty and our smart mirror has a lot of skincare and beauty functions to help them in daily life. Hence, we also targeted people whoare in the age of 15 years to 50 years. In this age range, people tend to love beautiness and have concern for their looks and skin.

CONCLUSION

As a conclusion, Maya Smart Mirror can be connected to home appliances, mobile devices, etc which can expand the functionality of the mirror. People may be interested to purchase one for their own home and business due to the function of it. We also believe that our product can generate huge profit as the beauty care is growing from year to year and also can benefit our future investor.

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