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“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
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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

3rd International Exhibition & Symposium Productivity, Innovation, Knowledge, and Education 2023 (i-SPIKE 2023)

NEUROTRAVEL

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ABSTRACT

Neurodivergent travel signifies the experiences of neurodivergent individuals, whose neurological disorders and cognitive functioning are different from the normal norm. Traditional travel can be troubling for neurodivergent people for reasons such as sensory overload and unfamiliar environments. Plus, traditional travelling methods include searching the internet separately for information on how to handle neurodivergent episodes like panic attacks and anxiety attacks and spend less time arranging the itinerary while looking for accessible facilities for neurodivergent travellers. The goal of neurodivergent travel is to develop equitable and accessible travel that meet the various needs of neurodivergent travellers. NeuroTravel is an application for a resolution created to be used by neurodivergent travellers to make their travelling experience smoother and travelling feels much more accessible for them. It also comes with the objective to raise awareness about neurodivergent in general and neurodivergent travel. On the other hand, it includes the visited destination's details, and media integration as calming and distraction features. Plus, it can be an advantage for the neurodivergent traveller's companion whereby the companion can give assistance to the traveller using tips and guides provided in the application. NeuroTravel also allows a patient-doctor communication in a chatbox feature to ease the communication between the travellers and their personal doctors. In contrast to neurodivergent travellers, various physical disabilities facilities have been created and are easily accessible. Thus, NeuroTravel application aims to be an application that is user-friendly for the travellers, and makes travelling easier and more comfortable for them. In order to reach potential users, the application will be commercialised through typically largely used platforms such as TikTok, Instagram and Facebook.

Keywords: neurodivergent, traditional travel, neurotravel, destination's amenities details

INTRODUCTION

Neurodivergent is a non-medical umbrella term for people who have differences in their mental functions (Gregory, 2023). Examples of neurodiverse are autism spectrum disorder (ASD), attention-deficit/hyperactivity disorder (ADHD), Tourette's syndrome, and so much more. Several traits or characteristics of a neurodivergent person are such as unusual responses to sensory input and unusual physical behaviours (Rudy, 2023). Depending on the individuals' needs and requirements, travel accessibility for neurodivergent people can vary. Attempts have been made to increase inclusion and cater to a range of requirements in the travel sector. For example, Disney World has provided accessibility by including restrooms for companions, and information about each attraction's stimulation levels. Hence, the team has decided to come up with an application named NeuroTravel that includes several features which aims to help and ease the travelling experience for the neurodivergent travellers



Figure 1 NeuroTravel Logo

PROBLEM STATEMENT

Neurodivergent travel refers to the experiences of neurodivergent people, who have conditions related to the brain and cognitive functions that differ from the norm. Traditional travel might be difficult for them due to sensory overload and unfamiliar situations. The lack of personalised and effective travel alternatives for individuals with neurological conditions causes substantial difficulties and restrictions for neurodiverse travellers. Furthermore, travel accessibility for them can vary depending on their needs and requirements.

OBJECTIVES

- i. To raise awareness and promote acceptance from the public towards neurodivergent travellers.
- ii. To assist and ease the travel experience of neurodivergent people.
- iii. To offer guidance and tips for the traveller's companion.






NOVELTY





The innovative aspects of NeuroTravel application novelty lies in its specific focus on making an enjoyable and comfortable travel experience, through smart tourism features. Furthermore, this application includes a patient-doctor communication and medication reminder feature for users to update their doctors about their health status, and symptoms.

METHODS TO USE NEUROTRAVEL APPLICATION

The steps on how to use the application are as follows:

Table 1. NeuroTravel method

STEPS	DESCRIPTION
Step 1: 	Open the Apple Store or Google Play Store on a smartphone and search for 'NeuroTravel'. Once found, download it.
Step 2: 	To access the features and functionalities of the NeuroTravel application, users are required to either sign in or sign up using their Gmail, Facebook or Twitter account.
Step 3: 	Users must fill in required personal information such as name, date of birth, gender, contact number and disorder.
Step 4: 	To further tailor the user's travel profile, the users must include more personal information, such as travel destination, the name of their travelling companion, emergency contact, and medical certificate if there is any.
Step 5: 	Users need to fill in their planned location and it will peak hours of business, break area availability and distance, and nearby medical facilities if he or she is in need of medical assistance.

<p>Step 6:</p> 	<p>Users can connect their music streaming accounts to listen to music and read short novels for them to use to calm themselves down whenever they feel overwhelmed.</p>
<p>Step 7:</p> 	<p>Users can manage their medication schedule and communicate with their doctors, ensuring continuous care and a better travel experience in this section.</p>
<p>Step 8:</p> 	<p>Travelling companions of the users can refer to tips and guides provided whenever extra assistance is needed by users.</p>
<p>Step 9:</p> 	<p>Users have the choice to leave feedback and rating on this application's final section based on their experiences using it.</p>

PRODUCT COMMERCIALISATION

The suggested platform to commercialise the NeuroTravel application is through advertisements on social media such as TikTok, Facebook and Instagram. The advertisement will appear based on the algorithm searched by the potential user with the keyword related to neurodivergent travelling. Few information about the application is shown on the advertisement and will suggest the potential user to download the application at the Google Playstore for android users and Apple Store for IOS users.

CONCLUSION

NeuroTravel aims to make travel easier for neurodivergent travellers by providing helpful features as well as promoting awareness and the acceptance of neurodivergent disorders in society. NeuroTravel is a valuable tool that simplifies travel planning and provides accessible information, ultimately Neuro Travel strives to enhance the travel experience for neurodivergent travellers, enabling them to enjoy the trips and create long lasting memories regardless of their neurological differences.

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