

Lung Anatomy And Physiology



Abstract

In this project, the mobile application that we had developed with the feature of augmented reality (AR) and it's named as PNEU-PRo™. This project shows lung anatomy and physiology, and through this application, users able to learn lung anatomy and physiology with the aid of virtual content such as 3D model of lungs, animation video.

Introduction

This project is focused on the interaction feature of augmented reality (AR). A mobile application that shows lung autonomy and physiology will be developed in this project. It will help students to have a better understanding on how our lungs work and able to study lung anatomy and physiology easily. Besides, virtual contents in 3D model and animation videos are provided to further describe and explain the topic.

Materials & Method

Materials used in this project:

- A physical 3D model of lungs
- A laptop or PC with an internet connection
- Unity software
- Vuforia software
- Autodesk Recap Photo software

Methods used in this project:

- 3D model rendering method
- Agile development method

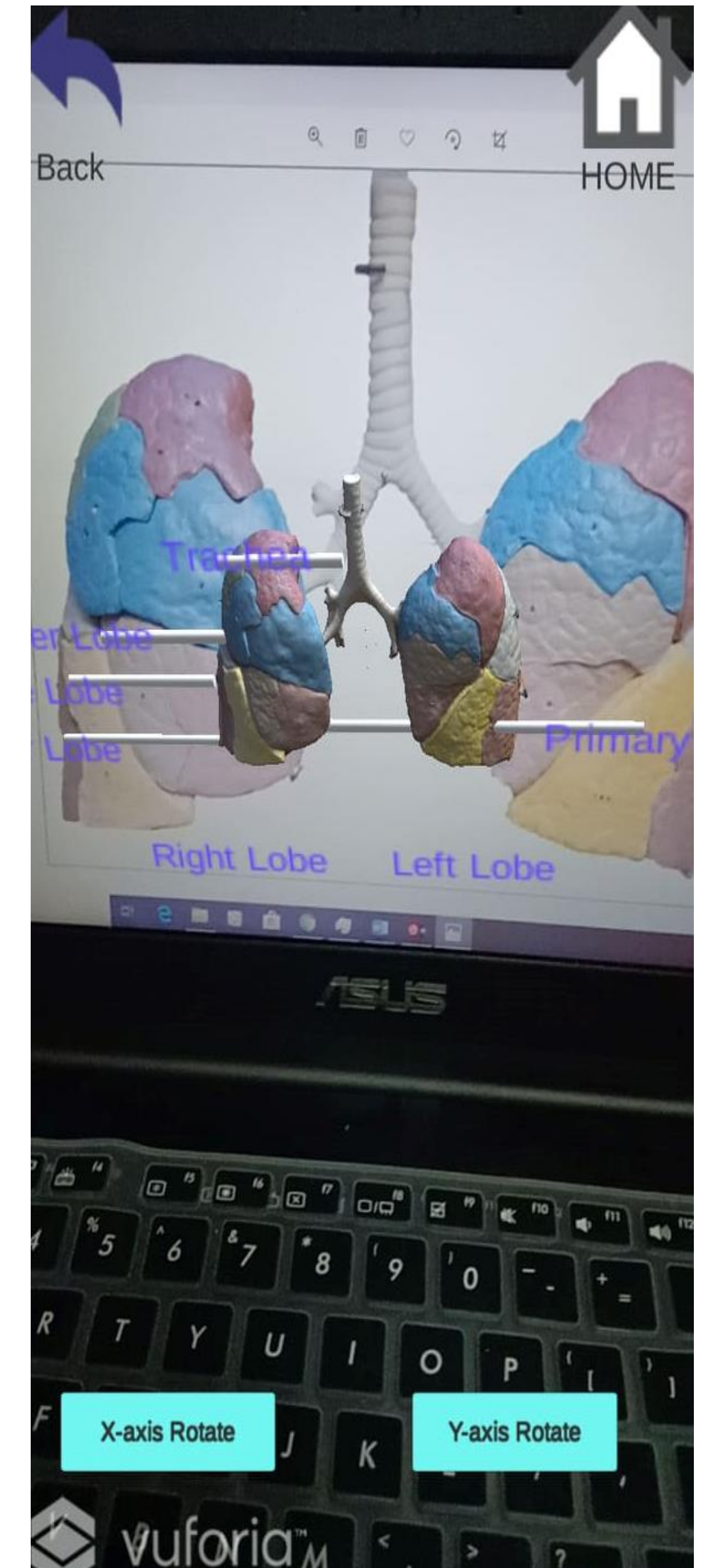


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Results & Discussion

The lung anatomy and physiology mobile application is developed completely and fulfilled all user requirements. Based on results of a survey done, we can conclude that this mobile application is able to attract users or students to learn more on lung anatomy and physiology. The interaction feature used in this application are augmented reality (AR) and animation video. Virtual contents will be displayed when scanning the marker on the bookmarks, whereas animation video will describe the information of lung anatomy and physiology.



Conclusion

This project is enables students and users to learn the lung anatomy and physiology and improve their understanding on the lung anatomy and physiology. This mobile application has fulfilled all the requirement and it is indeed an user-friendly application.

References

- J. Keith Fisher, MD. (Dec,2018). Breathtaking Lungs: Their Function and Anatomy. Retrieved from <https://www.healthline.com/human-body-maps/lung>
- Photius Coutsoukis. (n.d). The Lungs. Retrieved from https://theodora.com/anatomy/the_lungs.html

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