



# Survey Questions

## AR for Engineering Education

This survey is about an Augmented Reality mobile application that can be used to improve the quality of teaching in engineering education. (While this project focuses on using 3D models for engineering topics, the models can be for any education topic.) The app will display the models required to be taught in engineering courses in the 3D interface. The students will be able to interact with the model using a touch interface to rotate, translate, and scale. It also has a quiz mode where questions about the model will be asked to access student knowledge. (If you are interested in using the app and providing feedback, you can download and test the app with apk from the following link.

<https://drive.google.com/file/d/1N5xoDpqJPdfLRfKGFOKMzsqbZnkv3KXg/view?usp=sharing> )

**\* Required**

Type: Choose One

...



Required: ☒

X

### Please watch the app demo portion in the video before proceed

[https://youtu.be/dr\\_S37FEki0?t=205](https://youtu.be/dr_S37FEki0?t=205)

- ☐ I have watched the video.
- ☐ I have watched the video and tried the apk.

[Edit](#) answer choices.

Type: Choose Multiple

...



Required: ☒

X

### Which of these define your current role? (Multiple selection)

- ☐ Student
- ☐ Educator
- ☐ Industry Professional
- ☐ Other

[Edit](#) answer choices.

...

Type: Short Answer ▼

Required: ☐

X

**If you selected "Other", please specify your role.**

Short answer text

...

Type: Choose One ▼

Required: ☒

X

**What is your education background?**

- ☐ STEM
- ☐ NON-STEM
- ☐ Both

[Edit](#) answer choices.

...

Type: Choose Multiple ▼

Required: ☒

X

**In your opinion, what goals can be achieved using an AR app? (I**

- ☐ Mixed reality (Virtual and real-world environment)
- ☐ Interactivity
- ☐ Learning
- ☐ Gaming
- ☐ Entertainment
- ☐ Other

[Edit](#) answer choices.

...

Type: Short Answer ▼

Required: ☒

X

**If you selected "Other", please specify other goals.**

Short answer text

...

Type: Choose One ▼

Required: ☒

X

**The demo video showed a demo of AR mobile app. In a scale of**

- ☐ 5 (Highest)
- ☐ 4
- ☐ 3
- ☐ 2
- ☐ 1 (Least)

[Edit](#) answer choices.

...

Type: Agreement (5..1) ▼

Required: ☒

X

**In your opinion, do you think AR method is better than traditional**

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

...

Type: Agreement (5..1) ▼

Required: ☒

X

**In your opinion, would this kind of AR learning apps would impr**

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

Type: Choose One ▼

Required: ☒

X

## Which 3D virtual model display using mobile AR did you find most useful?

- ☐ Markers recognition (3D model on top of car)
- ☐ Marker-less recognition (3D model on ground plane)
- ☐ Both
- ☐ Other forms

[Edit](#) answer choices.

Type: Short Answer ▼

Required: ☐

X

## If you selected "Other", please specify other forms that will be most useful.

Short answer text

Type: Choose Multiple ▼

Required: ☒

X

## Which features are useful in the app? (Multiple selection)

- ☐ Rotation
- ☐ Scaling
- ☐ Show/Hide Labels
- ☐ Other

[Edit](#) answer choices.

Type: Short Answer ▼

Required: ☐

X

## If you selected "Other", please specify other useful features.

Short answer text



Type: Agreement (5..1) ▼

Required: ☒

X

## Do you think interactive (touch-based rotation/scaling) feature

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree



Type: Agreement (5..1) ▼

Required: ☒

X

## Do you think the used quiz features are beneficial in learning?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree



Type: Choose Multiple ▼

Required: ☒

X

## Which quiz feature do you think is useful? (Multiple select)

- ☐ Simple
- ☐ Interactive
- ☐ Other

[Edit](#) answer choices.

Type: Short Answer ▼

Required: ☒

X

## If you selected "Other", what other type of quiz do you have in n

Short answer text

Type: Choose One

Required: ☒

X

**Do you think the "Interactive quiz" is effective in accessing stud**

- ☐ 5 (Highest)
- ☐ 4
- ☐ 3
- ☐ 2
- ☐ 1 (Least)

[Edit](#) answer choices.

Type: Short Answer

Required: ☒

X

**Overall, in the app, what feature did you like the least?**

Short answer text

Type: Choose One

Required: ☒

X

**Do you think such AR apps can help solve your problem/achiev**

- ☐ 5 (Highest)
- ☐ 4
- ☐ 3
- ☐ 2
- ☐ 1 (Least)

[Edit](#) answer choices.

Type: Choose One

Required: ☒

X

**How do you rate your level of confidence in navigating/using th**

- ☐ 5 (Highest)
- ☐ 4
- ☐ 3
- ☐ 2
- ☐ 1 (Least)

[Edit](#) answer choices.

...

Type: Choose One ▼



Required: ☒

X

## How do you rate the user interface of the overall app?

- ☐ 5 (Highest)
- ☐ 4
- ☐ 3
- ☐ 2
- ☐ 1 (Least)

[Edit](#) answer choices.

...

Type: Choose One ▼



Required: ☒

X

## Overall, how would you rate the beta version of the app?

- ☐ 5 (Highest)
- ☐ 4
- ☐ 3
- ☐ 2
- ☐ 1 (Least)

[Edit](#) answer choices.

...

Type: Short Answer ▼



Required: ☒

X

## Do you have comments/suggestions about any aspect of the ap

Short answer text

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+ Add Question

Save Questions

Save Questions & Exit

**Don't forget to save your changes!**