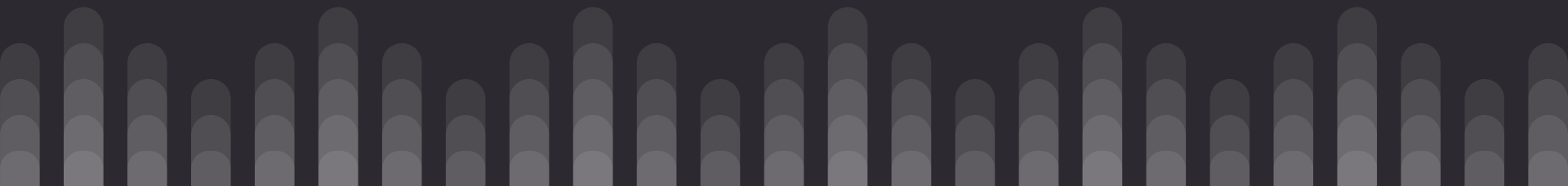


Find-Vote-Rate: Crowdsourcing Interior Designs with Amazon's Mechanical Turk

Lizzie Ferguson, Owen Hiland, Catherine Yeh





Our Goal: Crowdsourcing Interior Design

Source: [Contemporist](#)

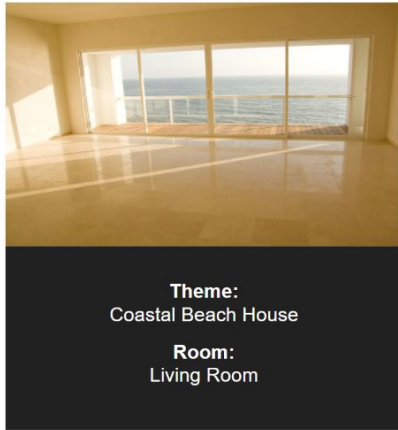
- **Why interior design?**
 - ◆ Most people don't have the expertise or background to design interior spaces on their own
- **Why crowdsourcing?**
 - ◆ Time
 - ◆ Cost
 - ◆ Scalability
 - ◆ No Physical Constraints
- **The challenge:** subjectivity of design

Our Question:

Given an empty room and theme, can the crowd generate a cohesive, client-specific, and aesthetic interior design mood board through building off decisions made by other workers?

Find-Vote-Rate

Start with an Empty Room



FIND

A Product

REPEAT 5X

VOTE

For the Best Choice



RATE

The Final Design



Cohesive	★★★★☆
Client-specific	★★★★★
Aesthetic	★★★★☆
Overall	★★★★★

Find-Vote-Rate



Find a sofa for this living room

Suppose you are an interior designer and your client wants a **coastal, beach house** themed living room. The empty room is shown to the left.

Given the theme, please find a suitable **sofa** on this IKEA page: <https://www.ikea.com/us/en/cat/all-sofas-39130/> for this living room. *Open the link in a new tab.*

Copy & paste the url of your chosen product here:

ex. <https://www.ikea.com/us/en/p/emten-bath-mat-light-pink-10465471/>

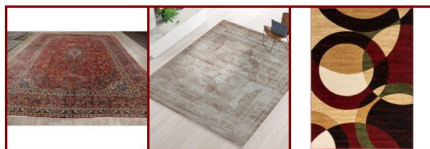
Why did you choose this sofa?

ex. I thought it fit the theme well and was a nice color.

If you have any questions or concerns, please fill out [this feedback form](#) and we'll be in touch ASAP.

Find-Vote-Rate

OPTION 1 OPTION 2 OPTION 3



Vote for the best rug for this living room

On the left are three rugs that an interior designer has chosen for a **modern, minimalist** themed living room. If you scroll down, you can see the empty room that this rug will be placed in and the items that the client has already selected.

The room and items so far:



Given the theme and pre-selected items, which of these three **rugs** do you think would best suit this living room?

Please select an option below.

- Option 1
- Option 2
- Option 3

Why did you vote for this option?

ex. I thought it fit the theme the best and matched the colors of the rest of the room.

If you have any questions or concerns, please fill out [this feedback form](#) and we'll be in touch ASAP.

Find-Vote-Rate



Rate this living room design

On the left is an interior design moodboard (ie. a collection of products) compiled for a client who wanted a **coastal, beach house** themed living room. Please rate this design on the following three criteria:

1. COHESIVE

On a scale of 1 to 5, with 1 being "nothing matches" and 5 being "everything matches," how would you rate the cohesion of this living room design?

Please drag the slider to the appropriate number.

Check this box to confirm your rating

2. FITS THE THEME

Recall that the client wanted a **coastal, beach house** themed living room. On a scale of 1 to 5, with 1 being "doesn't fit the theme at all" and 5 being "fits the theme perfectly," how would you rate this living room design?

Please drag the slider to the appropriate number.

Check this box to confirm your rating

3. VISUALLY APPEALING

On a scale of 1 to 5, with 1 being an ugly, bad design and 5 being a beautiful, great design, how would you rate the overall aesthetic appeal of this living room design?

Please drag the slider to the appropriate number.

Check this box to confirm your rating

4. EXPLAIN YOUR RATINGS

Why did you rate this living room design like you did? Please describe any specific strengths or areas for improvement.

ex. Everything matched but the design doesn't fit the theme the client wanted.

Find-Vote-Rate in Action!



Start with an empty room



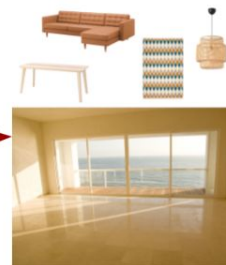
Add sofa



Add table



Add rug



Add light



Add decor → final design!

Step
0

Step
1

Step
2

Step
3

Step
4

Step
5

Experiment 1

1. **Theme:** Coastal, Beach House
2. **Room:** Living Room
3. **Furniture Website:** Ikea
4. **Order of Items:** Forward (Sofa → Table → Rug → Lighting → Home Decor)



Experiment 2

1. **Theme:** *Modern, minimalist*
2. **Room:** Living Room
3. **Furniture Website:** *Wayfair*
4. **Order of Items:** Forward
(Sofa → Table → Rug →
Lighting → Home Decor)



Experiment 3

1. **Theme:** Coastal, Beach House
2. **Room:** Living Room
3. **Furniture Website:** Ikea
4. **Order of Items:** *Backward*
(Home Decor → Lighting → Rug → Table → Sofa)



Our Results



Experiment 1



Experiment 2



Experiment 3

Future Work

- **Incorporating 3D room modeling into our system**
 - ◆ More realistic reflection of interior design process
- **Applicability of Find-Vote-Rate to other task domains**
 - ◆ Fashion design
 - ◆ Product design
 - ◆ Crowd writing
 - ◆ ... and so on!



Thank You!

Source: [LuxDeco](#)