Dance With Me

Tiffany Quon - Peer Project Review 2

How might we use the data we generate to connect with others?

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Dance With Me is an interactive art installation that visualizes similarities within your own movement, between you and the previous person who used Dance With Me, **and for CPSC 547**...

For CPSC 547...

Visualizes similarity in movement between you and **the last 100 people** who used Dance With Me.

Summary of Concept

- 20 second-long experience.

- Use Kinect to capture motion data.

- As you move around the scene, Dance With Me will visualize people* who were at the same** location in space at the same relative time.

- Visualization is generated in real time.

- User gets to keep image of final visualization.

* between 0-3 past users
** based on discretized position of right hand

Example of visualization through space and time

Visualization Decisions

- Silhouette color (RGB) is determined by the person's body position.
  - Right arm → R value
  - Left arm   → G value
  - Legs   → B value
  - Chose RGB over HSV for straightforward mapping of movement → color for user.

- Include fading trail of past silhouettes' movement to see how those users' journeys compare to your own.

- Chose to visualize past silhouettes for aesthetic purposes: more on this in example footage!
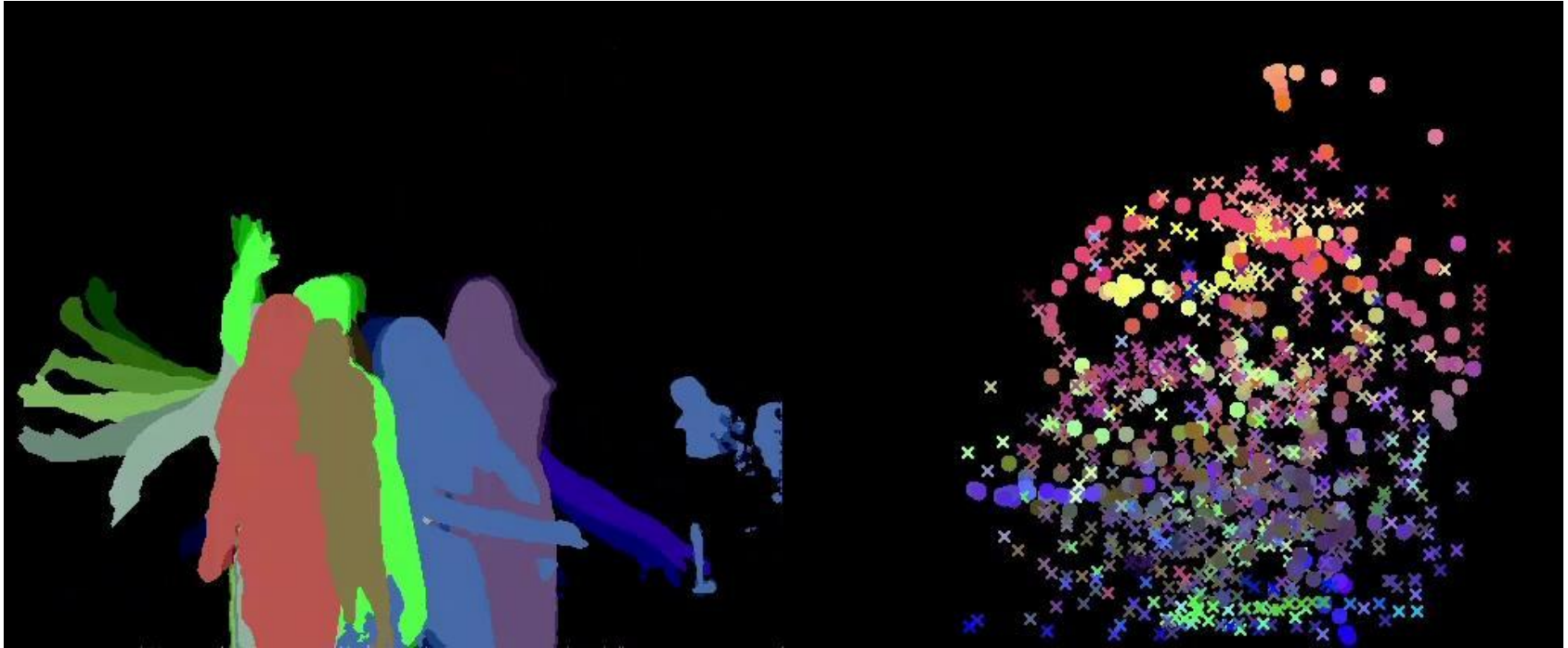

Example of visualization through space and time

Example: map position to color

Right arm controls red, left arm controls green, legs control blue.

Example: crosses and circles

Circles encode current user's right hand position and crosses encode past users' right hand positions. Color encodes body position. Circles and crosses were chosen so that more attention is drawn to current user's contribution to the output image.

Example: past silhouettes

ONLY past users' silhouettes are visualized in the output image. Again, color encodes body position. Bodies layer on top of one another over time. More consistent with output images from other parts of Dance With Me (examples to come).

User Testing Feedback

- May be helpful to provide highlight for current user's body.

  - Need more feedback: some users feel that no highlight is needed

- Give the user more control by only bringing up past silhouettes if the user moves.

  - If the user stays still, nothing will change on screen.

  - While this may give the current user a clearer understanding that *they* bring up past silhouettes by moving around, this does not truly look for people who were at the same place at the same time (now there is the additional requirement that the user must be moving through space)

Dance With Me: Complete Experience

Overall Dance With Me experience

- First, visualizes you vs. you for 20 seconds.

- Next, visualizes you vs. previous for 20 seconds.

- Finally, visualizes you vs. all for 20 seconds.

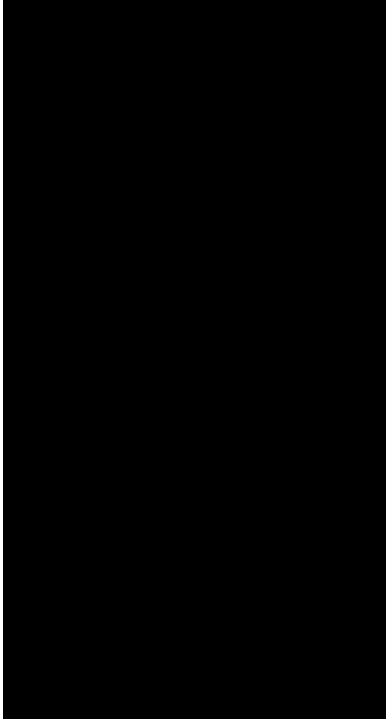- The user will get to take home images of all three visualizations after using Dance With Me.

You vs. you: heatmap of position in space
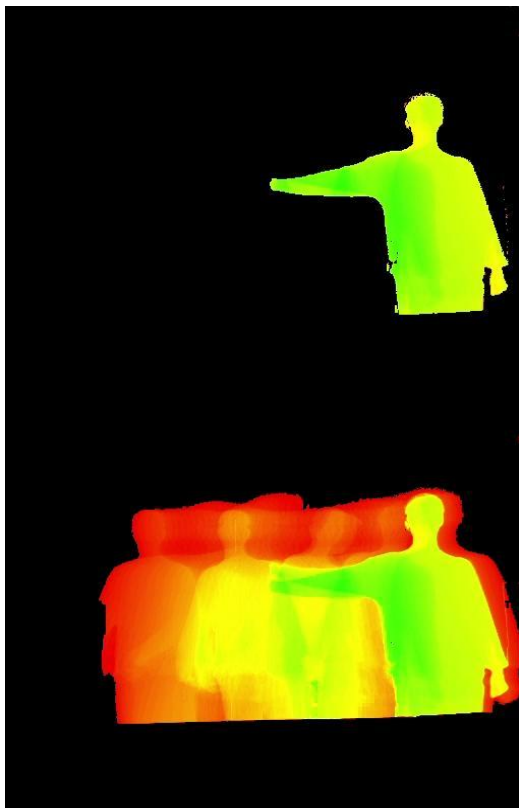
As you move around, the output image creates a heatmap (on a rainbow scale) of where you spend the most time.

- Image starts off black

- Once you move into a region, it turns red
  - The more time you spend there, the more the region moves towards the other end of the scale (blue)

- Output image is heatmap

You vs. previous: physical intersections and joint position similarities

Timestep-for-timestep, visualizes similarities between your movement and the movement of the person who used Dance With Me right before you.

- Physical intersection → shape

- Joint position similarity → hue

- Output image is all shapes generated, layered on top of each other over time

You vs. all (again): people at the same place at the same time