Ten-million-order Human Database for World-wide Fashion Culture Analysis

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Proposal

Discovering world-wide fashion trends w/ 25M fashion DB!

Contributions
1. Fashion Culture DataBase (FCDB), which contains and is refined 25M images on Flickr
2. As the perspective of huge DB, we conduct inter-city similarity and temporal fashion trends in a simple way

Dynamic Fashion Cultures (see right fig.) in a city??
- World-wide fashion trends from SNS images
- What kind of FashionDB do we need?

We have constructed a FashionDB for the emerging task

Approach

Fashion Culture DataBase (FCDB)

City Similarity (left) & Dynamic Fashion Cultures (right)

<table>
<thead>
<tr>
<th>Database</th>
<th>#images</th>
<th>#cate.</th>
<th>GPS?</th>
<th>Box?</th>
<th>Time Stamp?</th>
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</thead>
<tbody>
<tr>
<td>HipsterWars</td>
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<td>Fashionista</td>
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<td>1,050</td>
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<tr>
<td>FCDB (ours)</td>
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<td>16</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Experiment

- w/ Fashion Style Distribution (FSD) based on codeword vector (StyleNet + k-means cluster)
- 16 cosmopolitan cities are calculated with each other

Summary

1. Fashion Culture Database
   - Ten-million-order fashion database
   - More reliable DB by removing the noise of FCDB
2. Fashion style analysis w/ FCDB
3. Regionality / Temporal change
   - Suggests economic and cultural formation
   - Suggests the possibility of contributing to event detection on user interest / SNS

Larger, more diverse and less noise w/ data collection and refinement
- FCDB contains 25M images, geo-tag and time stamps
- Furthermore, FCDB improves reliability by removing noise
- In the refinement, we prepare 2,886 pieces (totally 5,772 pieces) of clothes, noise images for SVM

[Database Collection] Faster R-CNN

[Data Refinement w/ SVM]

Fashion snap Non Fashion Snap

1,980,000 geo-tag imgs
25,707,690 person bboxes
16 cosmopolitan cities

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