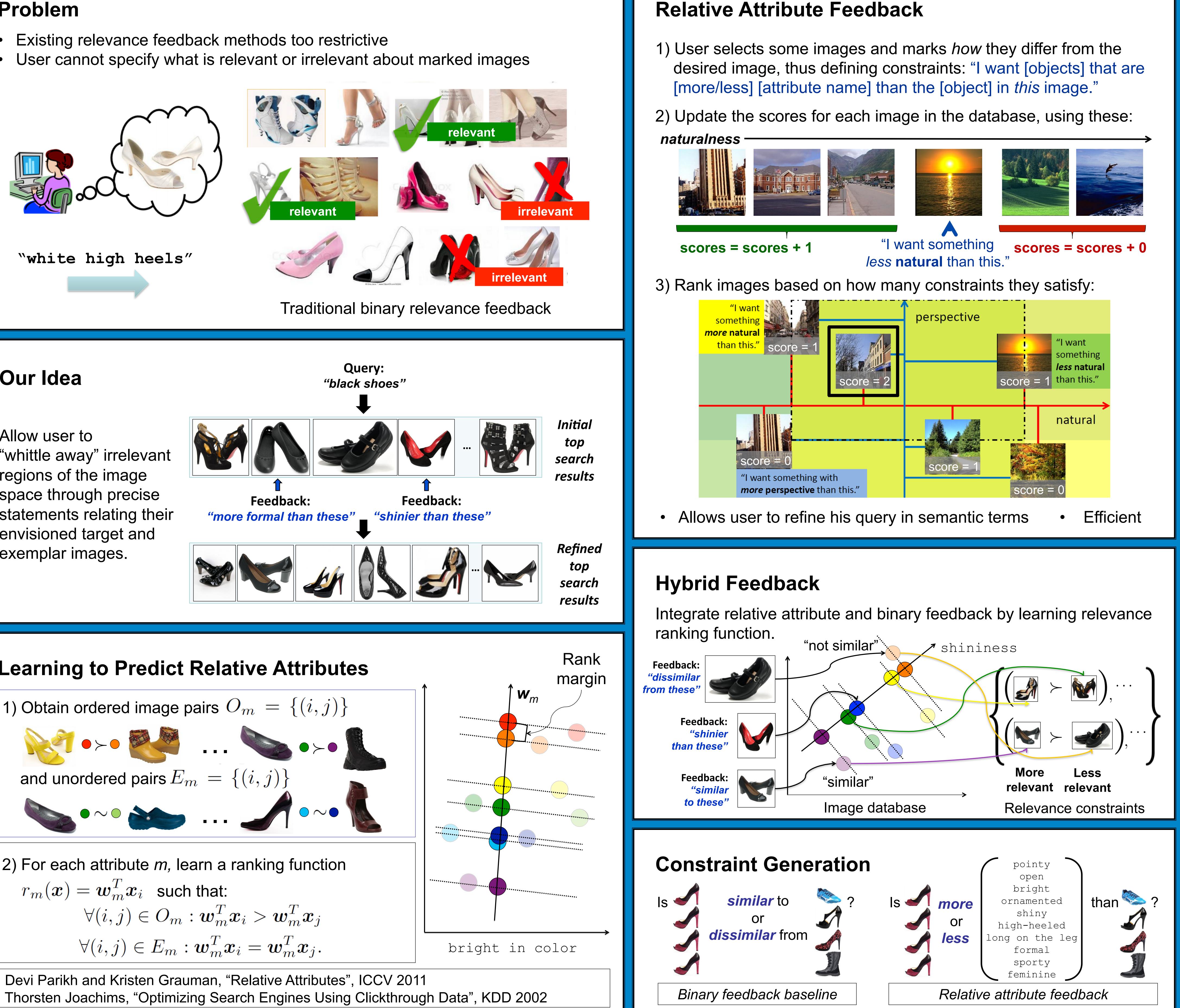
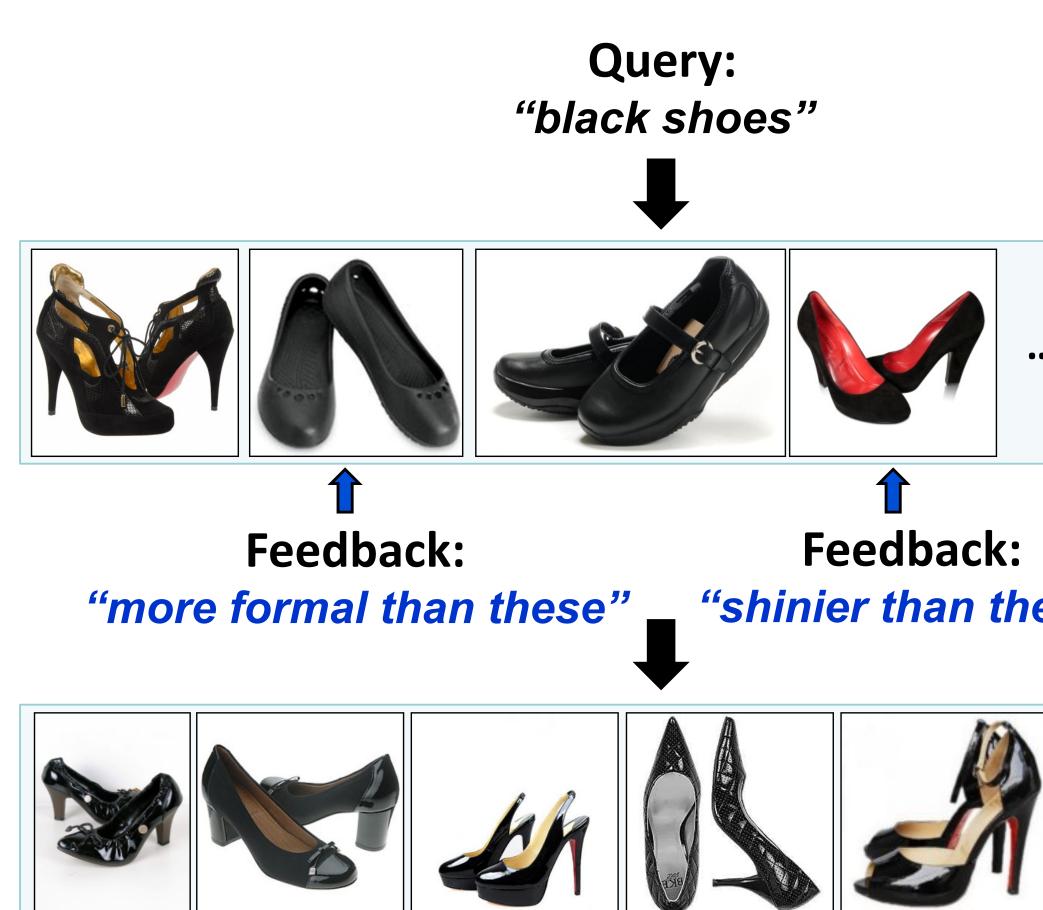
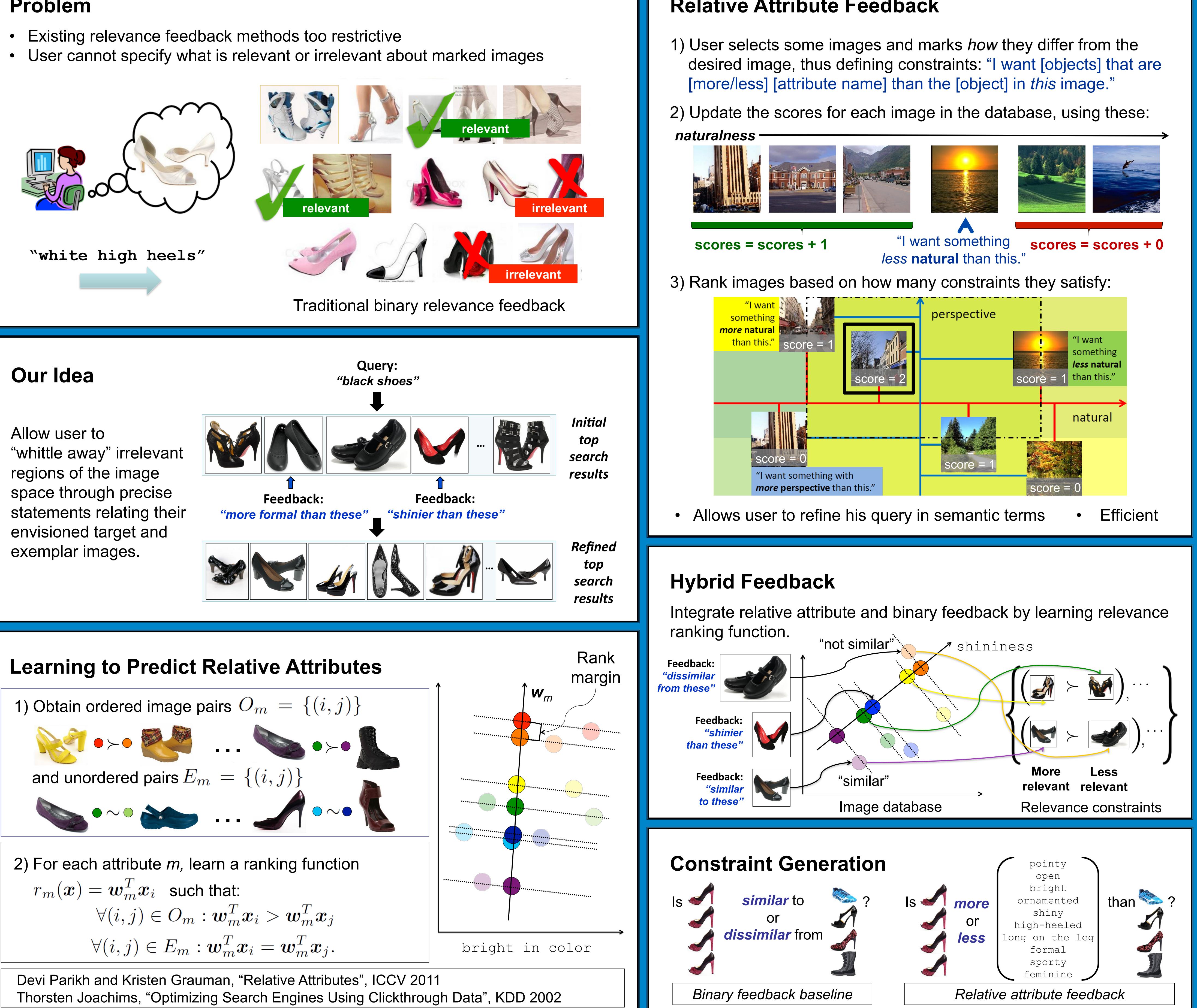


WhittleSearch: Image Search with Relative Attribute Feedback

Problem







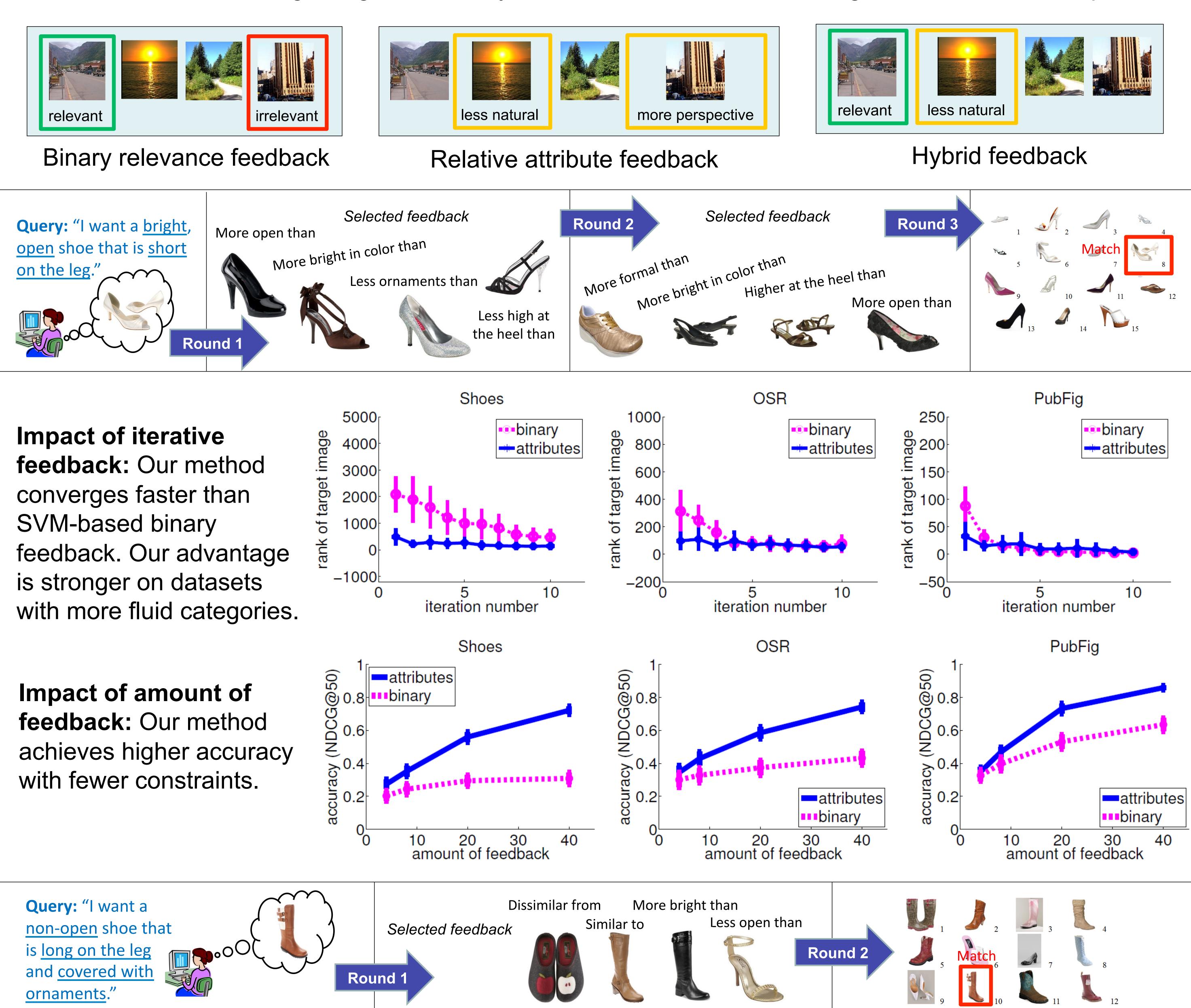
Adriana Kovashka¹ ¹The University of Texas at Austin

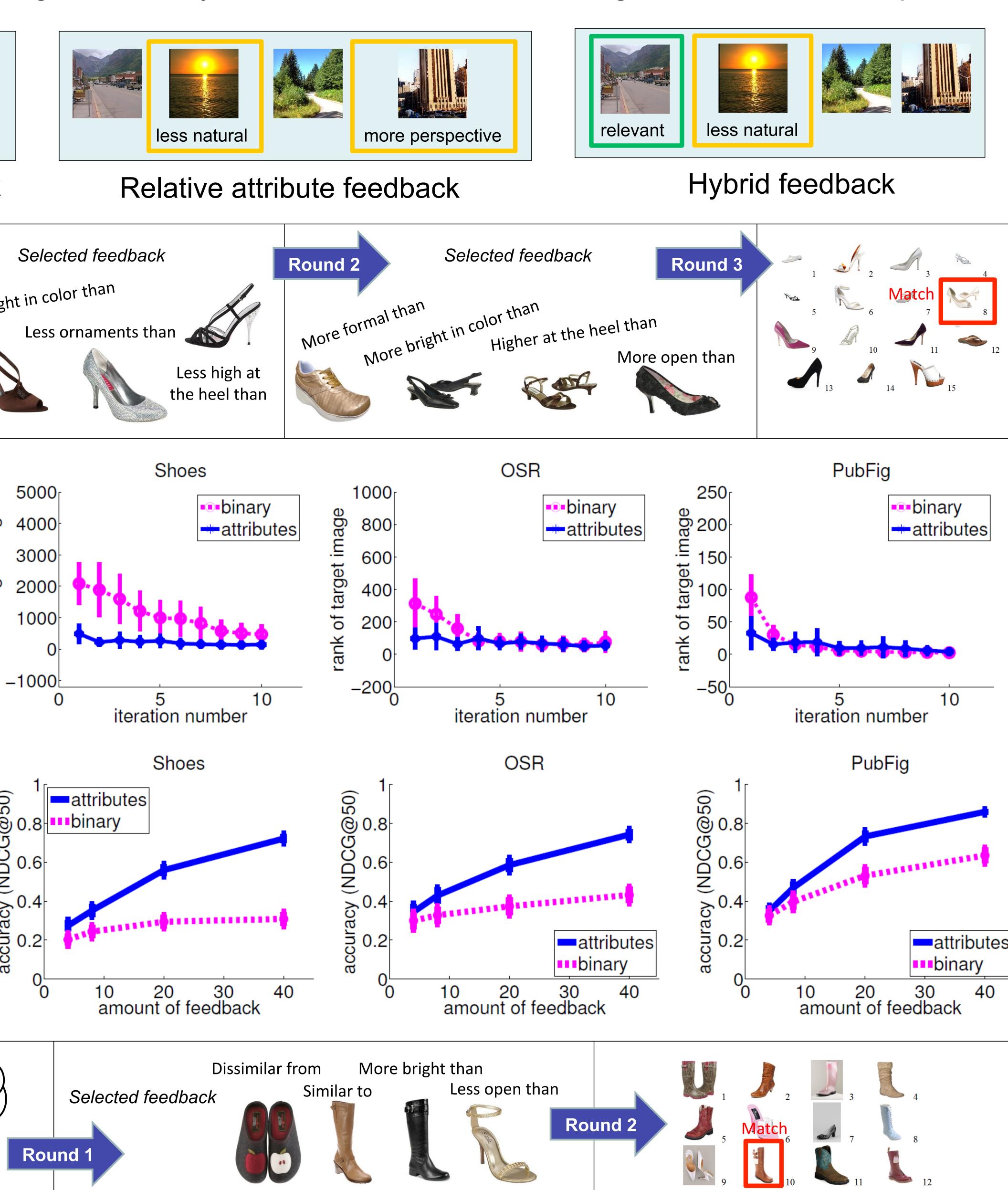
Devi Parikh² Kristen Grauman¹ ²Toyota Technological Institute Chicago (TTIC)

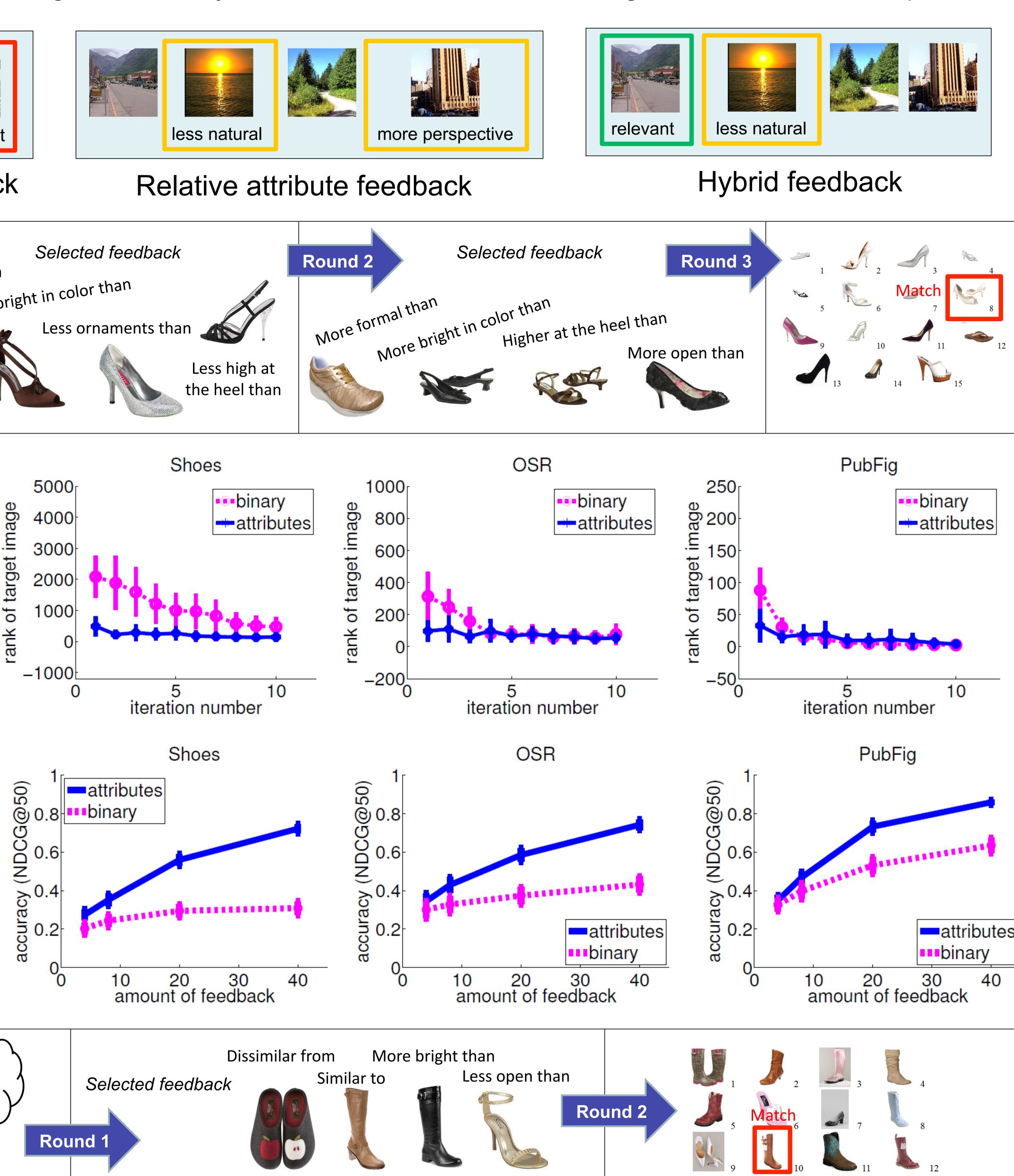
Results

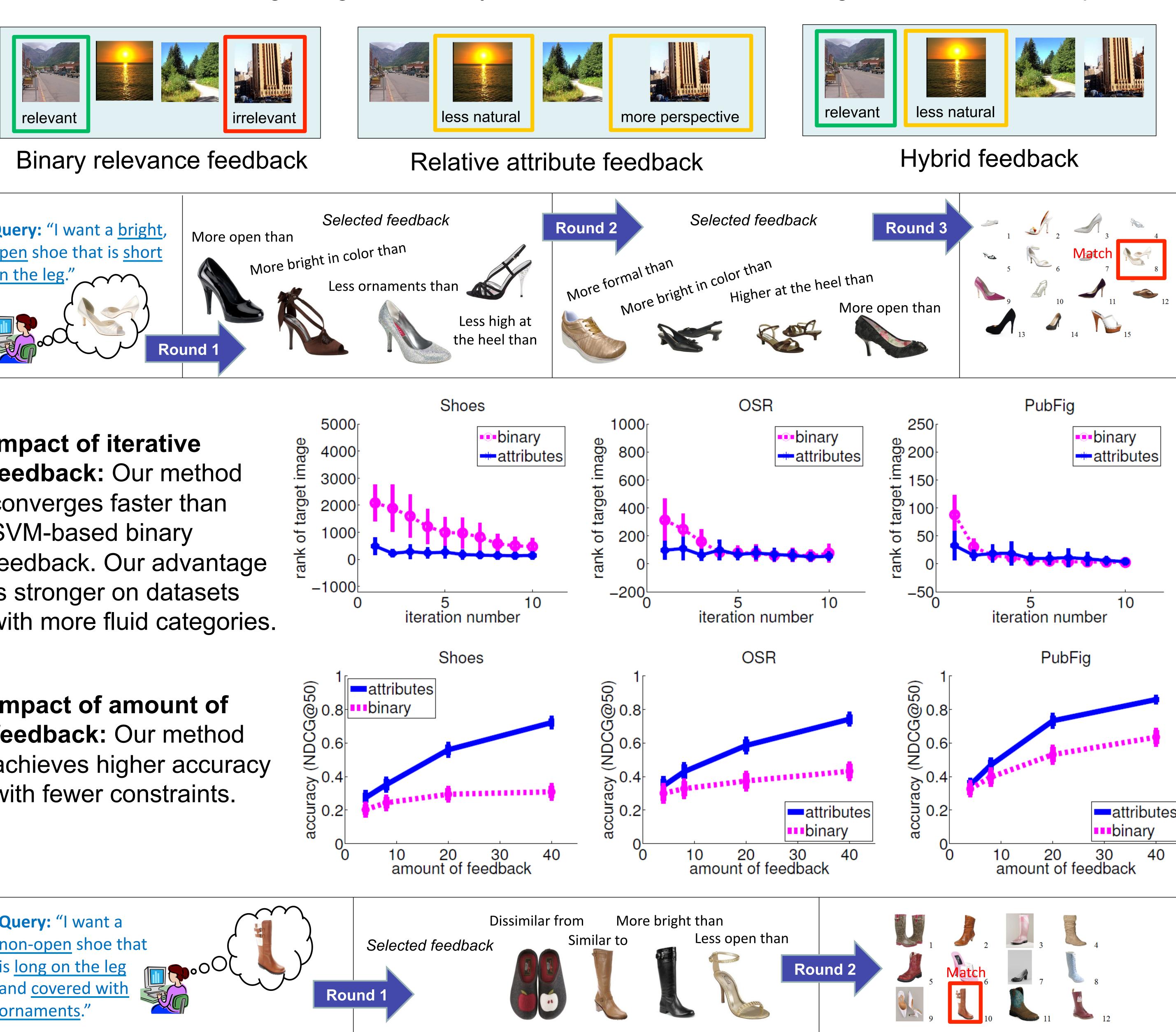
Datasets

Evaluation Metrics









See our paper for additional results with human-given constraints, keyword search, impact of reference images, and impact of supervision type (comparing categories vs. instances).

Conclusions

- Refines image search results more effectively, often with less human effort





Shoes – 14,658 images from Attribute Discovery; augmented w/ 10 attributes; features: GIST+color • OSR – 2,688 images from Outdoor Scene Recognition; 6 attributes; features: GIST • PubFig – 772 images from Public Figures; 11 attributes; features: GIST+color

• Rank assigned to the secret target image (low = good, image appears near top) NDCG@50 correlation between method's ranking and ground truth ranking (high = good) • Ground truth ranking: images ranked by their distance to the secret image in learned feature space

• Proposed method allows user to communicate precisely how results compare with mental model