

# Personalized Recommendation System for Questions to Answer on SuperUser

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## Problem and Objective

- There are lots of questions on Q/A sites like SuperUser to answer.
- Want to recommend questions that are recent/active and relevant to users' interests

## Our Contribution

- A system combining tags, community detection, and temporal features to create more accurate recommendations
- Over 50% of time, question user answers will be among the top 29 recommendations

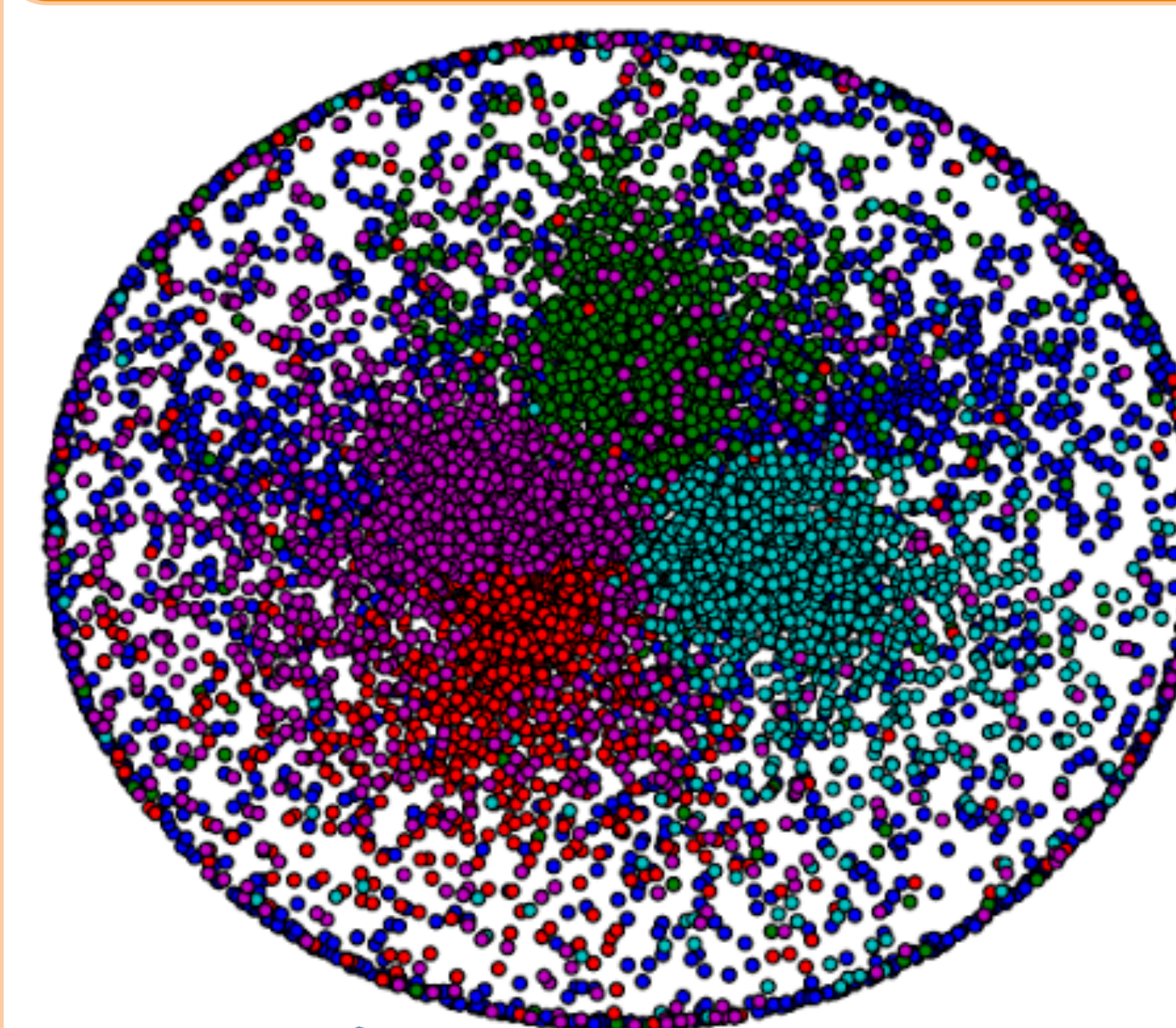
## Implementation Components

- Topic-relevance: How much question's tags match those of questions user has previously answered
- Question-activity model: Likelihood question will be answered, given elapsed
- Community-relevance: Detects user communities based on tags, and supplement user's tags with those from his community.

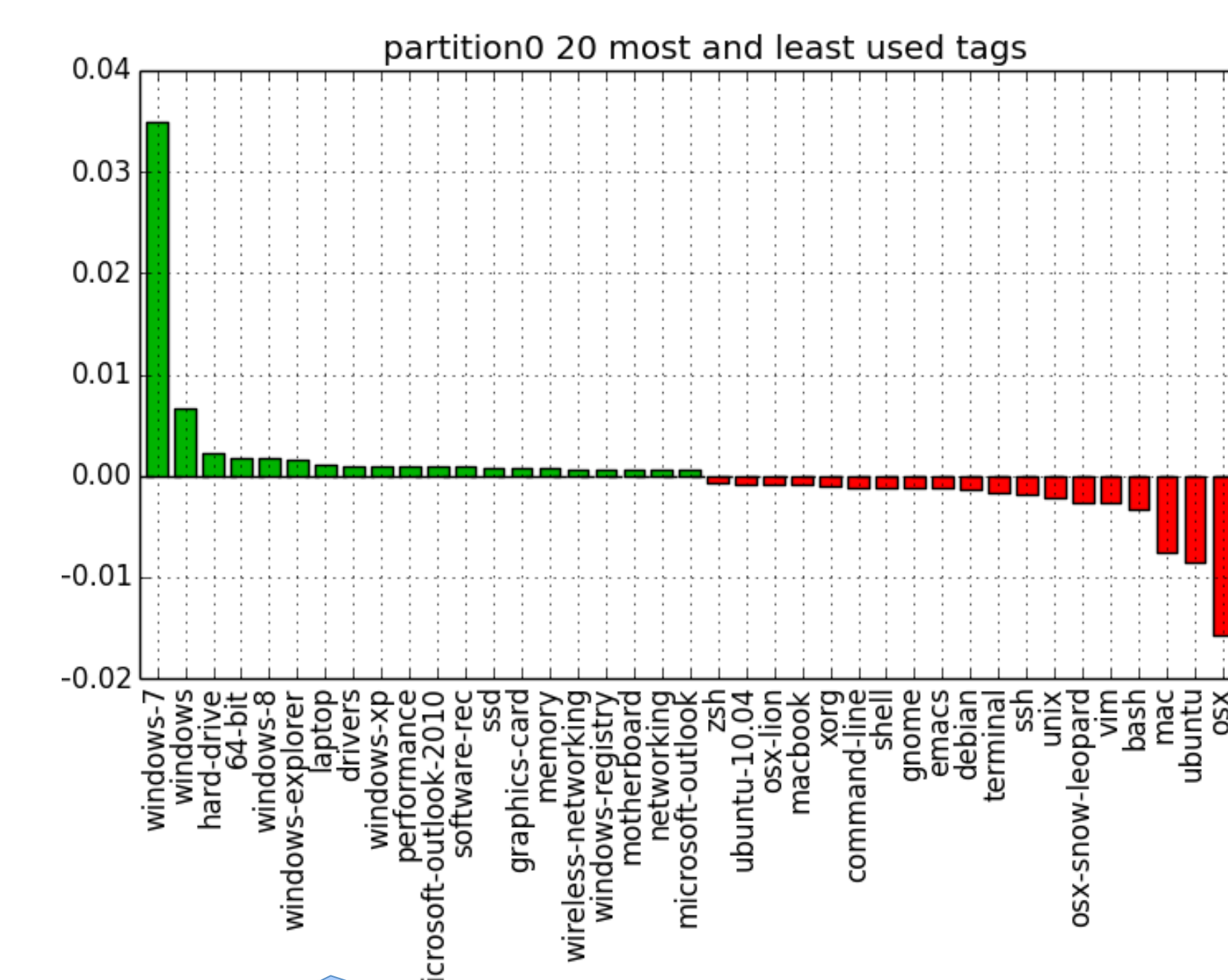
## Related Work

- Anderson et al 2012: Predicts activity of a question on StackOverflow
- Pazzani et al 2007: Recommendation systems based on content

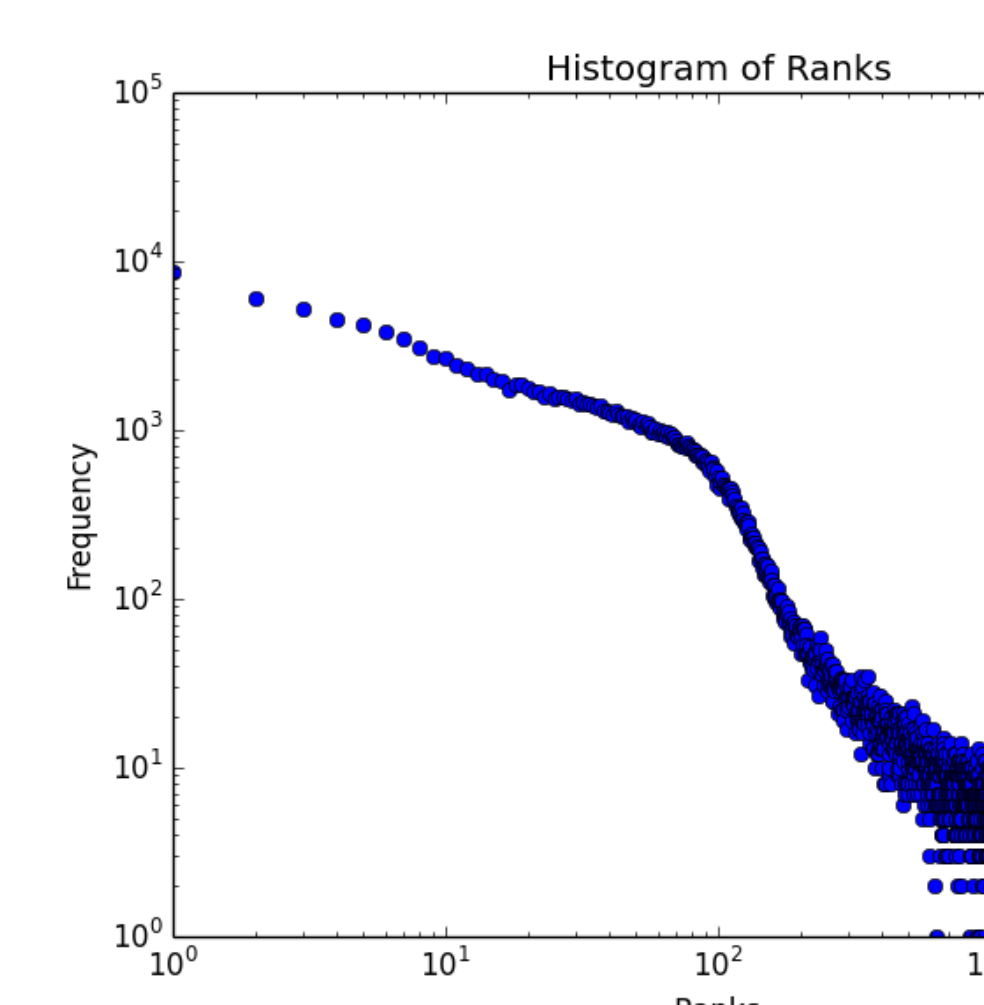
## Results



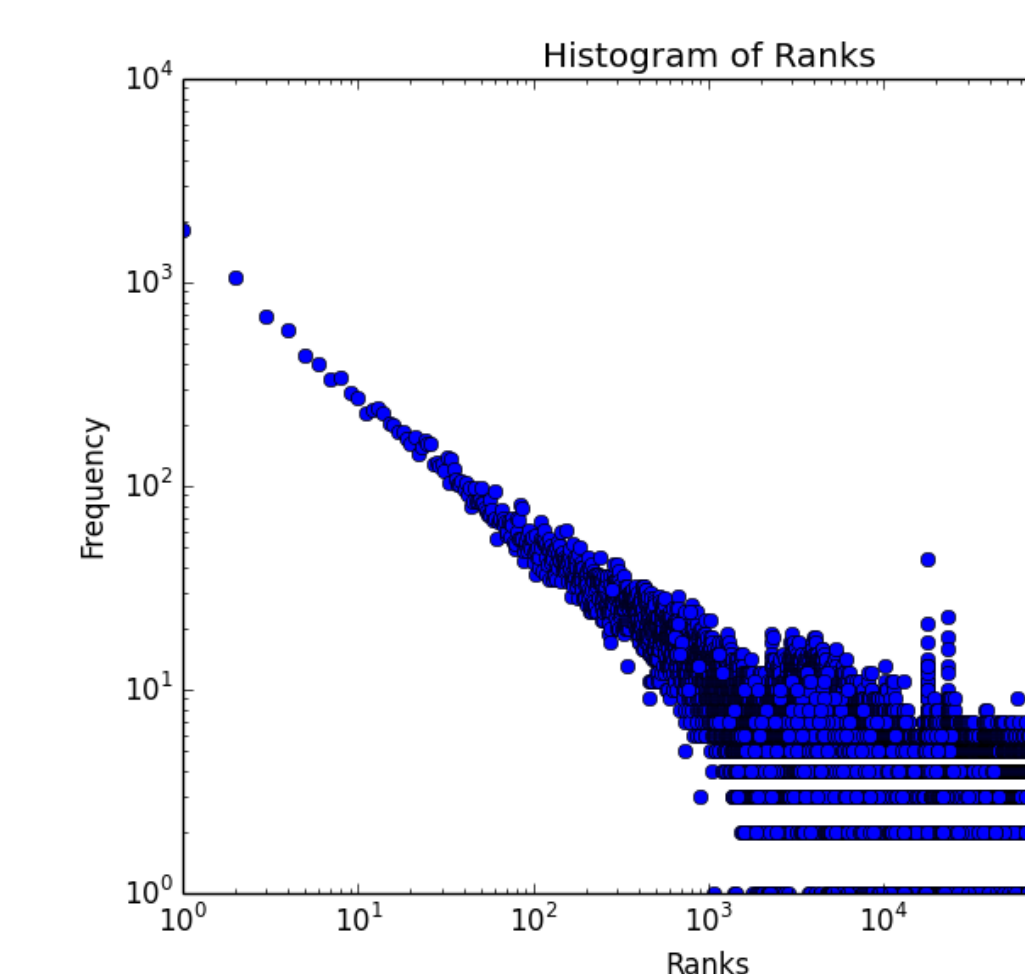
User communities detected in SuperUser



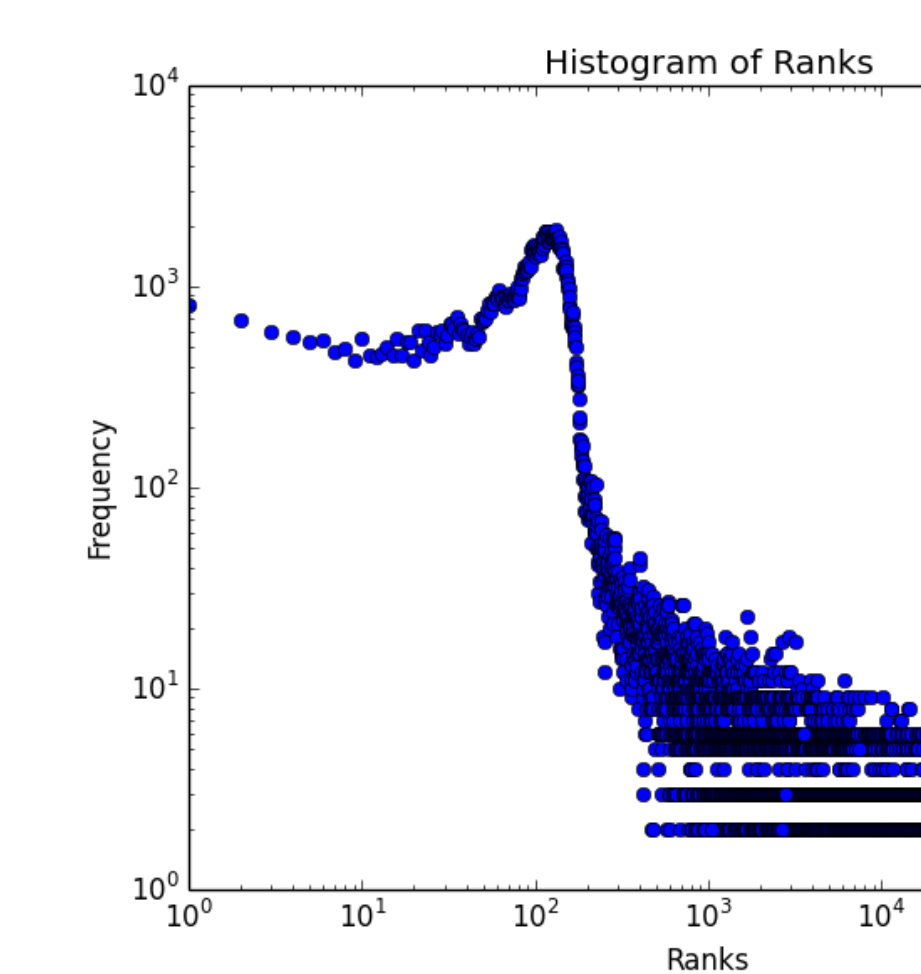
An example user community's tag distribution



With combined model, half the questions answered will be top 29 recommendations



With only topic relevance model, half the questions answered will be in top 19219 recommendations



With only question activity model, half the questions answered will be in top 108 recommendations