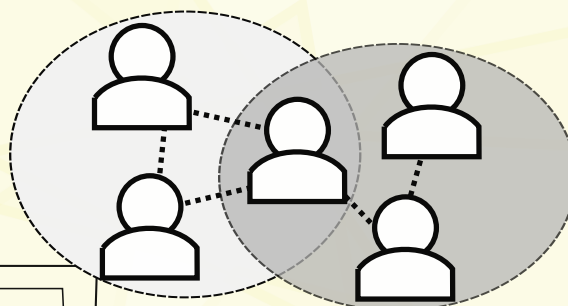
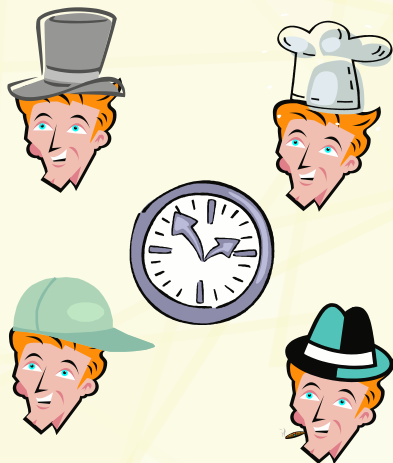


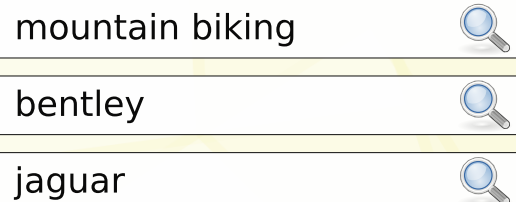
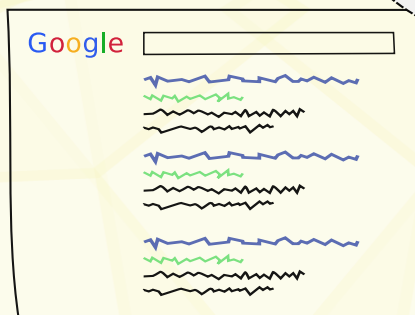
# Multiple Sources of Search Context, their Influence and Applicability

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## 1. Seasonality context



## 2. Social context



## 4. <Any> context

## 3. Activity context



Which source of context is best?  
Under what circumstances?

## Unified Context Model

Set of triples:  $\langle d, m, w \rangle$ ; document, metadata, weight

Arithmetic operations:

$$k * C = \{ \langle d_1, m_1, w_1 * k \rangle, \dots, \langle d_n, m_n, w_n * k \rangle \}$$

$$C_1 + C_2 = \{ \langle d_{1,n}, m_{1,n}, w_{1,n} + w_{2,n} \mid m_{1,n} = m_{2,n} \rangle, \dots \}$$

$$C = w_1 * C_1 + w_2 * C_2 + \dots + w_n * C_n$$

## Learning context weights

- Browser extension
- Select source of context
- Personalize results, interleave
- Select winner
- Set of situations and winning contexts
- Learn mapping from situation to context weight

## Situation descriptors

query\_type, query\_length  
 query\_has\_url?, query\_popularity  
 query\_repeated?, query\_in\_session?,  
 search\_activity\_deviation  
 part\_of\_peak?, workday?  
 workhour?, ...