User's interest detection through eye tracking for related document retrieval

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Eye trackers could become part of every computer and smartphone in the near future

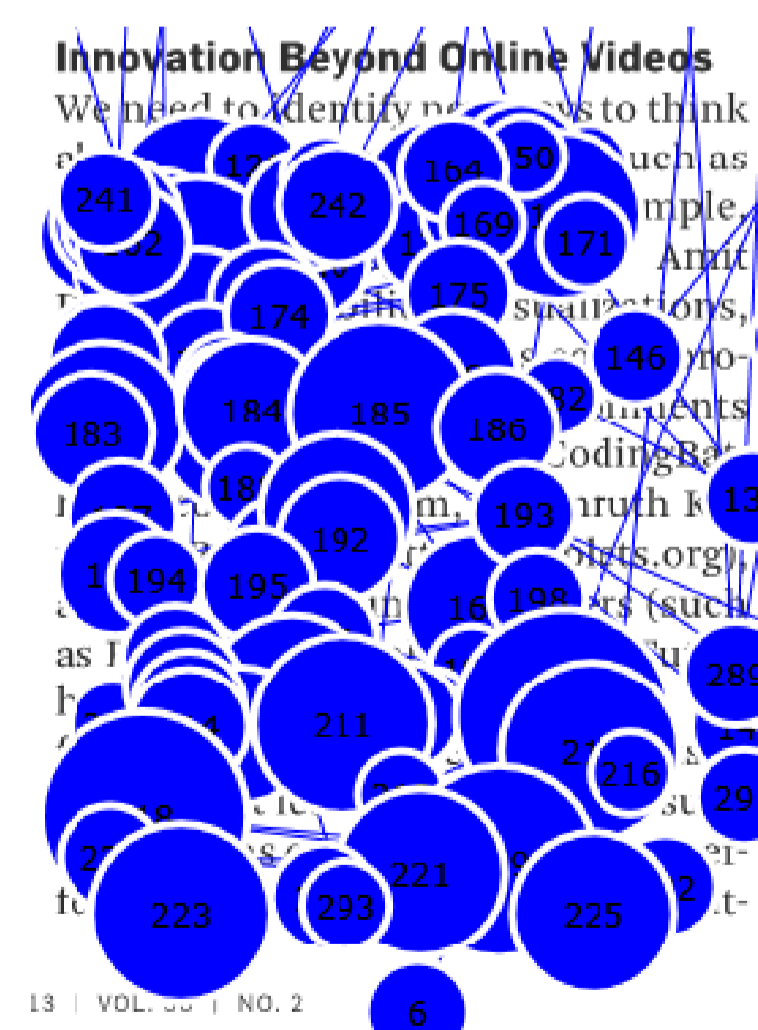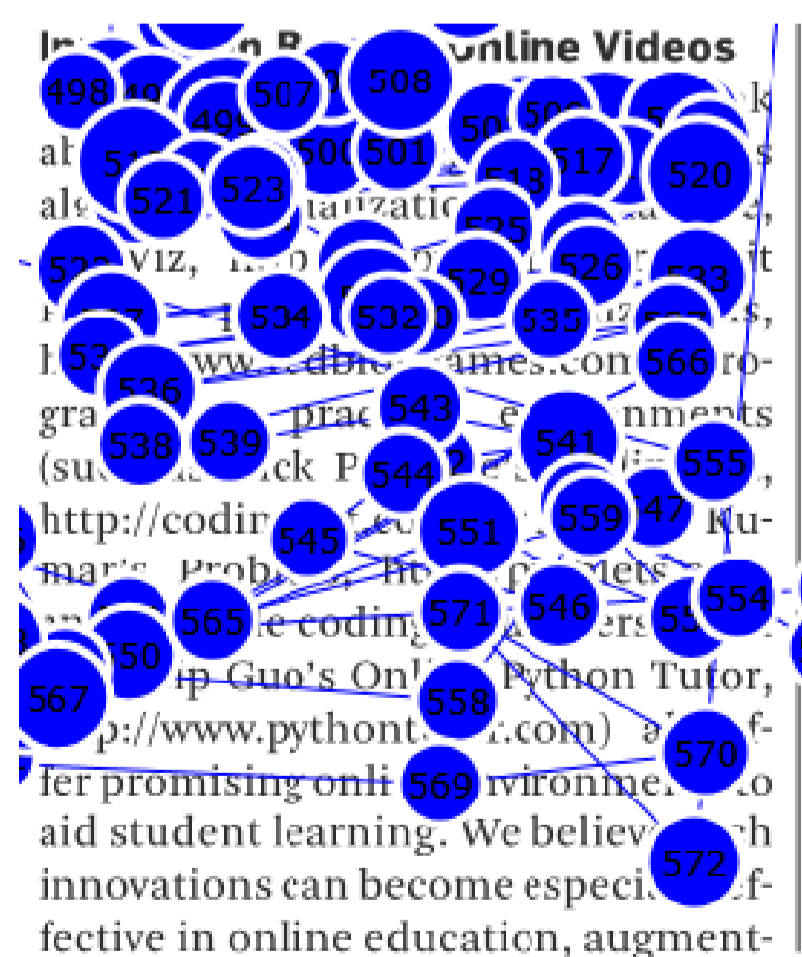Gaze data can serve as user interest indicator

We compare properties of eye movement and manual annotations for interest detection

Heatmaps are not enough

Patterns in the eye movement indicate fragment importance

Structure of saccades and fixations

Qualitative examination of article reading habits

Comparison of gaze data with manual annotations created using Annota (annota.fiit.stuba.sk)

- Long fixations and short saccades
- Short fixations and long saccades
- Repeated short fixations on the same words
- Return back a few lines or to previous paragraph
- Skip paragraph
- Small number of fixations concentrated in clusters across long document part

Comparison of gaze data and annotations

Annotations used for related document retrieval

- Comparable results
- No conscious interaction needed
- Patterns prone to misinterpretation