The Last Click
Why Users Give up Information
Network Navigation

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Finding info on Web: a complex task

• Querying
• Navigating
• Backtracking
• Reformulating
Finding info on Web: a complex task

- Querying
- Navigating
- Backtracking
- Reformulating
- Frustrating
Analyzing when users give up is difficult

- Typical data source: Web-browsing logs:
  - cnn.com/
  - cnn.com/2014/02/10/travel/americas-most-romantic-towns
  - travelandleisure.com/articles/worlds-best-hotels-2013

- Specific target in mind, or casually browsing?

- Which URL is target?

- Did user find the info, or did they give up?

- Abandonment because info found, or because not found?

- One solution: manual coding
  
  e.g., Hassan, White, Dumais, Wang: “Struggling or Exploring?” (Yesterday)
Our approach: Wikispeedia.net

- Idea: give explicit targets to user
- Human-computation game designed by us
- Task: navigate from article A to article B using links only
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✓ All targets known ✓ Abandonment = failure
Example mission
Example mission

Optimal
Example mission

Optimal

Failed
Example mission

Optimal

Failed
Example mission

- Optimal
- Failed
- Successful
Success vs. failure

- Starting is easy: navigate through high-degree hub
Success vs. failure

• **Starting is easy**: navigate through high-degree hub
• Then, **successful users gravitate** towards target
Success vs. failure

- **Starting is easy:** navigate through high-degree hub
- Then, *successful* users *gravitate* towards target
- *Failing* users *orbit* around target
Success vs. failure

- **Starting is easy**: navigate through high-degree hub
- Then, **successful users** gravitate towards target
- **Failing users** orbit around target
- **Backtracking** a (weak) sign of failing
- **Failing users** more likely to backtrack despite progress
Predictive tasks

• Giving up before reaching target?
• Giving up after current click?
• Backtracking on next click?
Discussion

• Use case: increase user retention
  • Detect users about to stop navigating website
  • Counteract by offering help, special offers, etc.
• Do results hold beyond Wikipedia?
• Analyze scenario of navigation + querying
Summary

• **Goal**: understand when and why users **give up navigation**

• **Hard to understand in the wild**

• **Our approach**: study under ‘**laboratory conditions**’ using data from the navigation game **Wikispeedia**

• **Use insights to build** **predictive models**