

Visual Analytics: Making Sense of Big Data

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Data Visualisation

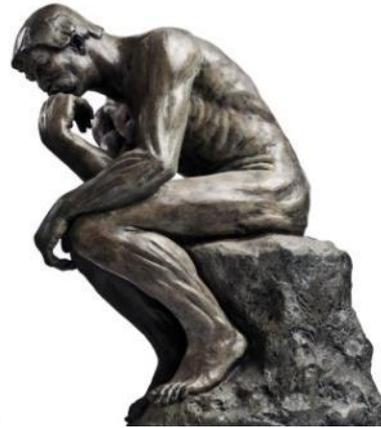
- Using human cognition for pattern discovery



Visual Analytics: Going Beyond Patterns



Data Analysis
& Visualisation



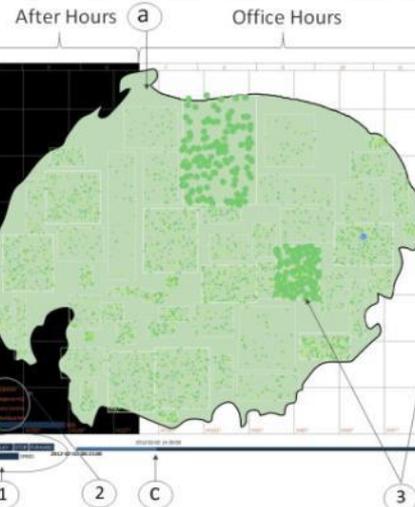
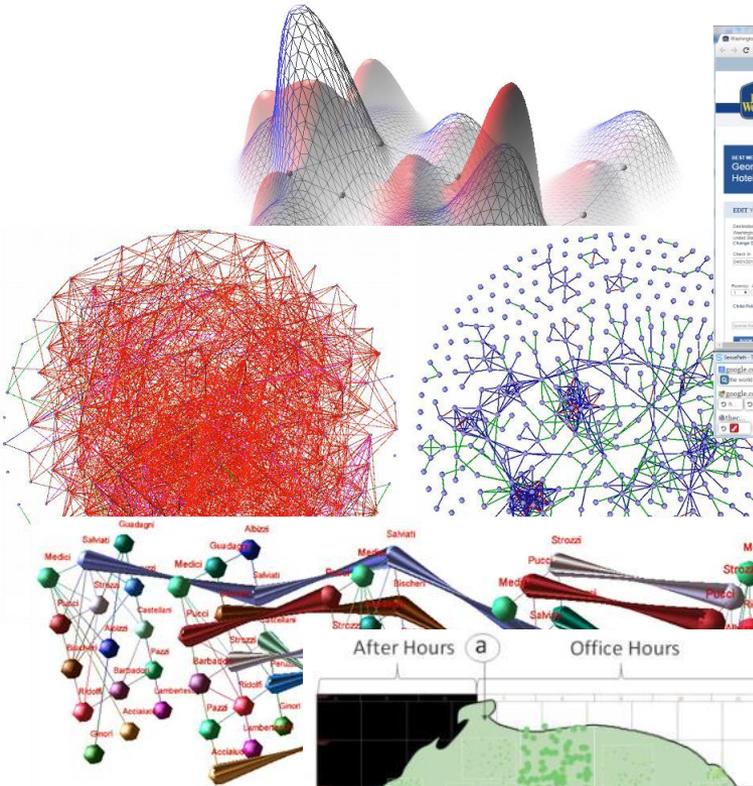
Reasoning



Decision

Examples: travel planning, buying a house, crime investigation

Research Projects



Screenshots of a web browser showing a Best Western hotel page (B) and a news article page (C). Below them is a table (D) with columns for Start time, End time, Action, Theme, and Description.

Start time	End time	Action	Theme	Description
00:00:00	00:00:00	page visited	page visited	27 seconds spent in browsing Washington DC hotels - BEST WESTERN Georgetown Hotel & Suites Embassy Row Hotel
00:00:10	00:00:00	site follow	site follow	29 seconds spent in browsing Washington DC hotels - BEST WESTERN Georgetown Hotel & Suites Embassy Row Hotel
00:00:49	00:07:12	site follow	hotel booking	23 seconds spent in browsing BestWestern.com, the world's biggest hotel family
00:00:16	00:00:00	page visited	page visited	At least 7, said firefighters - Washington Post - 08/01/14
00:07:14	00:07:31	page visited	page visited	17 seconds spent in browsing Best Western Georgetown Hotel & Suites - Google Maps
00:07:34	00:08:12	page visited	page visited	30 seconds spent in browsing BestWestern.com, the world's biggest hotel family

News article snippet with highlighted text in green and blue. The text discusses a fire at the Dancing Dolphin apartments in Abilene, Texas.

- Victor E. Viktor E performing at Abila coffee houses every Friday this month: Victor E kronos/schedule
- AbilaFireDept Abila Fire Department has dispatched two fire trucks to the Dancing Dolphin apartments at Achilles & Maday 8/1/14
- AbilenePost Abilene Fire Department on the scene of Dancing Dolphin fire at Achilles & Maday street
- KronosStar Abila Fire Department has dispatched 2 units to a possible fire
- NewsOnline Today Newly residents being evacuated in Dancing Dolphin fire in Abila, shows/scene
- AbilaFireDept Abila Fire Department fire truck #23 has arrived at Dancing Dolphin apartment #A2D
- HomeLandIlluminations Residents linking out of Dancing Dolphin fire
- AbilenePost Abila Fire Department on the scene of Dancing Dolphin fire at Achilles & Maday
- HomeLandIlluminations Police arrived at Dancing Dolphin fire - #11
- HomeLandIlluminations Smoke from first two floors of Dancing Dolphin apartments. Fire officials on site. #11
- InternationalNews Continuing fire at the Dancing Dolphin apartment Abila Firenews
- AbilenePost The location of the fire has been identified as the Dancing Dolphin Apartment complex #AbilenePost
- InternationalNews Fire at the Dancing Dolphin apartment complex - Abilene Firenews
- KronosStar Abila Police Department has sent two units to the fire at the Dancing Dolphin apartments. kronos/star
- AbilaPoliceDepartment Abila Police Department urges any witnesses of the hit and run incident on Schaber between Fira & 116
- AbilenePost Abila Police Department issues description of hit and run vehicle - is back van with partial license plate 132
- AbilaPoliceDepartment Abila Police Department releases a partial license plate number for hit and run vehicle LCG #A2D
- AbilaPoliceDepartment Abila Police Department reports a bicyclist has been struck on the 500 block of Schaber between Etra and Edes
- AbilaPoliceDepartment Abila Police Department reports a cat hit on Scollay street #A2D



Sidebar menu with various categories and sub-items, including 'PERSON', 'ORGANIZATION', 'FACILITY', and 'CITY'.

- PERSON
 - Sylvia Marie (3/43)
 - Laura Jacob (3/34)
 - Dr. Newman (3/33)
 - Sylvia (2/13)
 - Dr. Audrey McConnell Newman (2/12)
 - Dart Harris (2/9)
- ORGANIZATION
 - Abila Police Department (2/10)
 - Abila Fire Department (2/25)
 - POK (2/73)
- FACILITY
 - Dancing Dolphin (14/26)
 - Dancing Dolphin Apartment (1/19)
 - Achilles & Maday (1/13)
- CITY
 - Abila (12/56)
 - Kronos (11/10)
 - Scollay (1/1)

Helping Researchers Understand User

Current progress



User Study

Data Analysis



Implementation



Design **Need help**

Demo

The screenshot displays a web browser window with the Best Western Georgetown Hotel & Suites website. The website features a navigation menu with options like HOME, EXPLORE HOTELS, REWARDS, TRAVEL PLANNING, and DEALS & OFFERS. A search bar is visible, and the main content area shows a large image of the hotel building with a play button overlay. Below the image are tabs for OVERVIEW, AMENITIES, DINING, DISCOUNTS & PACKAGES, LOCAL ATTRACTIONS, and MAPS/DIRECTION. A 'BOOK THIS HOTEL' button is located at the bottom left of the main content area.

Overlaid on the browser are three SensePath windows:

- SensePath - Replay View:** Shows a video player with a play button and a progress bar at 06:18. The video content is a blurred view of the hotel website.
- SensePath - Transcription View:** Displays a table with the following data:

Start time	End time	Action	Theme	Description
00:05:03	00:05:15	location search		12 seconds spent in searching 'HEADQUARTERS washington dc'
00:05:19	00:05:24	page revisited 2 times		5 seconds spent in browsing 'info.worldbank.org/etools/edp/doc/HotelsWashingtonDC.pdf'
00:05:32	00:06:08	location search		37 seconds spent in searching 'BEST WESTERN GEORGETOWN HOTEL AND SUITES'

At the bottom of the browser window, the **SensePath - Timeline View** is visible, showing a sequence of search and navigation events. The timeline includes entries for 'google.co.uk', 'info.worldbank...', 'HEADQUARTERS was...', 'BEST WESTERN GEORGETOWN HOTEL AND S...', 'Washington D...', 'add: c...', 'remove: chec...', 'thechurchi...', and 'Reservation'.

Summary

- Skills I can offer:
 - Data visualisation
 - Big Data such as social media
- Need help with:
 - Design/build a tool working for users sensemaking, e.g., making it easier to find the right hotels
 - Visual design, experience design, etc.