



e-Tourism Hackathon and Structured Data

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STI · INNSBRUCK

1. e-Tourism Hackathon Seefeld 2017
2. Structured Data

- A hackathon (also known as a hack day, hackfest or codefest) ¹
 - a design sprint-like event
 - computer programmers and others (graphic designers, interface designers, project managers, subject-matter experts) collaborate intensively on software development projects

- e-Tourism Hackathon Seefeld ² offers you an opportunity to work in a team trying to solve real challenges in tourism industry by make use of structured data (Schema.org)

¹<https://en.wikipedia.org/wiki/Hackathon>

²<http://www.hackathon-seefeld.com/>



Structured Data

Why we need to learn structured data?

What is the relationship between structured data and our course?

We would like to hand over our jobs to computer. Therefore computer needs to be more intelligence, should be able to:

- Book a hotel room based on our preferences automatically
- Find the cheapest accommodation from multiple booking channels
- Combine multiple offers into one package, dynamically and automatically

“I would like to spend my 3 days holiday in Vienna next week”

- Computer should understand what you want:
 - i. Vienna is a City, located in Austria, with geo-location at (48.210033, 16.363449)
 - ii. Next week is a Date, one week from Today
 - iii. 3 days is a Number for duration

- Computer needs to think:
 - i. Your current location is not in Vienna (e.g. Innsbruck), the distance is about 470km
 - ii. Today is 10.03, so next week is 17.03

- Computer needs to make decisions:
 - i. To go to Vienna, you need to buy a ticket for flight or train or bus
 - ii. Which area of the city is the best to stay for next week
 - iii. Events that will be interesting for you

“I am going to Landeck for teaching but my car is broken on the highway”

- Computer should understand what you want
- Computer needs to think
- Computer needs to make decisions:
 - i. Send e-mail to students, inform that the lecture will be started a bit late
 - ii. Contact the nearest Auto-Repair shop and request for help
 - iii. Contact your insurance company and report the case

- Unstructured data
 - does not have a pre-defined data model or is not organized in a pre-defined manner
 - typically text-heavy, but may contain data such as dates, numbers, and facts as well
 - produces irregularities and ambiguities
- A data model
 - an abstract model that organizes elements of data
 - standardizes how elements relate to one another and to properties of the real world entities

How it contributes to make computer become more intelligence?

- When information is highly structured and predictable, search engines can more easily organize and display it in creative ways
- Artificial assistants can be more engaging with users

Recipes

 <p>Perfect Apple Pie Pillsbury 4.5 ★★★★★ 276 reviews 3 hr · 230 calories</p>	 <p>Apple Pie by Grandma Allrecipes 4.8 ★★★★★ 6,931 reviews 1 hr 30 min · 512 calories</p>
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³Image: <https://api.ai/>

Logo

Big 5 Sporting Goods

Customer service: 1 (800) 895-2944
Headquarters: El Segundo, CA
Stock price: BGFV (NASDAQ)
\$13.47 +0.07 (+0.52%)
Nov 21, 4:00 PM EST - Disclaimer

More about Big 5 Sporting Goods



Chevron Corporation

Oil industry company

Stock price: CVX (NYSE)
\$118.58 +1.27 (+1.08%)
Nov 21, 4:00 PM EST - Disclaimer

Headquarters: San Ramon, CA
Customer service: 1 (877) 596-2800

More about Chevron Corporation

Contact Numbers



Barack Obama

44th U.S. President

Barack Hussein Obama II is the 44th and current President of the United States, and the first African American to hold the office. [Wikipedia](#)

Born: August 4, 1961 (age 53), Honolulu, HI
Spouse: Michelle Obama (m. 1992)
Office: President of the United States since 2009
Parents: Ann Dunham, Barack Obama, Sr.
Siblings: Maya Soetoro-Ng, Mark Okoth Obama Ndesandjo, More
Education: Harvard Law School (1988–1991), More

Get updates about Barack Obama

Profiles

Social Profiles



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⁴Image: <https://api.ai/>



I need to fly to Boston next Tuesday.



```
{
  "action": "timetable.flights",
  "departure_location": "San Francisco",
  "arrival_location": "Boston",
  "date": "2016-09-05"
}
```



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⁵Image: <https://api.ai/>



Please help me find the best Italian restaurant nearby.



```
{  
  "action": "poi.search",  
  "type": "restaurant",  
  "cuisine": "Italian",  
  "location": "current"  
}
```



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⁶Image: <https://api.ai/>



Show the route to Battery Park.



```
{  
  "action": "navigation",  
  "destination": "Battery Park"  
}
```



7

⁷Image: <https://api.ai/>



Hey Calendar, schedule lunch with Mary Johnson at 12 pm tomorrow.



```
{  
  "action": "meeting.create",  
  "name": "Lunch with Mary Johnson",  
  "invitees": ["Mary Johnson"],  
  "time": "2014-08-06T12:00:00-07:00"  
}
```



8

⁸Image: <https://api.ai/>



Set thermostat to 72 degrees.



```
{  
  "action": "thermostat.setTemperature",  
  "degrees": "72",  
  "units": "F"  
}
```



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⁹Image: <https://api.ai/>

“George Bush, the 41st President of the United States is the father of George W. Bush, the 43rd President of the United States”

```
{
  "@context": "http://schema.org",
  "@type": "Person",
  "name": "George Bush",
  "disambiguatingDescription": "41st President of the US",
  "children": {
    "@type": "Person",
    "name": "George W. Bush",
    "disambiguatingDescription": "43rd President of the US"
  }
}
```

“A restaurant named ‘Fondue for Fun and Fantasy’ is fantastic and fun for all your cheesy occasions. It is open from 11:30 to 23:00 every day. Its menu is available online on <http://fondueforfun.com/menu>, and can be ordered by calling the telephone number +43 (512) 123-45678”

```
{
  "@context": "http://schema.org",
  "@type": "Restaurant",
  "name": "Fondue for Fun and Fantasy",
  "description": "Fantastic and fun for all your
    cheesy occasions",
  "openingHours": "Mo,Tu,We,Th,Fr,Sa,Su 11:30-23:00",
  "telephone": "+43 (512) 123-45678",
  "menu": "http://fondueforfun.com/menu"
}
```

“Ghostbusters was produced by Black Rhino in the United States”

```
{
  "@context": "http://schema.org/",
  "@type": "Movie",
  "name": "Ghostbusters",
  "productionCompany": {
    "@type": "Organization",
    "name": "Black Rhino"
  },
  "countryOfOrigin": {
    "@type": "Country",
    "name": "USA"
  }
}
```



Exercise

Exercise (1)

“You are planning to go to an event in a city in Austria”

- Find an event in a city assigned to you on <https://www.events.at/>
 - Create a structured data for the event
- Find 2 hotels and 2 restaurants which are close to the event
 - Create a structured data for each of them
- Based on these five structured data, make decision about which hotel(s) and restaurant(s) you prefer to stay and dining
 - Make your decision based on the provided structured data only
 - Your decision should be supported by facts in the provided structured data

Exercise (2)

Be aware:

- Hotel A – "Our hotel offers has the lowest price, 50 Euro per-night"
- Hotel B – "We offer you the best price, 45 Euro per-night"

Form a group of three or four students, fill in the prepared worksheet, and prepare slides to be presented in the class.

Your slides should cover at least:

- Why you choose the event, the hotel, etc.
- Could you find all required information from the provided structured data? If not, explain why?

Send your excel file and slides to me (zaenal.akbar@sti2.at) by the end of the course



Thank You