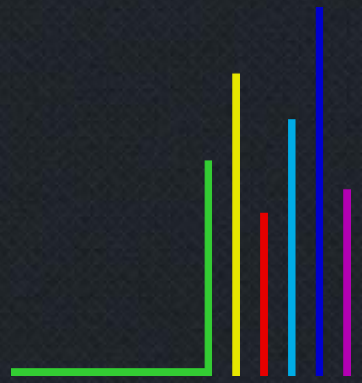
Coding Challenge and Hackathon

Georg F. Schneider & SSoLDAC Committee



LDAC 2019

Linked Data in Architecture and Construction Week

Summer School (17 – 18) + **7th LDAC Workshop** (19 – 21) June 2019 | Lisbon, PT

Recap: Overall Structure

Lectures

- Class room lectures
  experts to teach t
- basis for ha
  and hack
- Q&
  ng coffee and

Theory

Hands-On sessions

- Foster the theore
  knowledge of l
- Small gu
  lecture
- C
  y applying
  nowledge

Practice

Hackathon

- Practical resear
  solve real pro
- Guidan
- G
  wins price!

Use it!

About

- Practical research work to solve real problems
- Guidance by lecturers
- Group work! -> If you have no group yet, find one!
- Best group wins price!

Wednesday 19 June
17:30 - 18:30: presentation of summer school coding challenge results – Prize awarding ceremony

Goals

The coding challenge is designed to…

- … rapidly shape your skills in coding LBD applications
- … address real world research problems
- … start coding. Now.

What we expect…

- Present your research outcome to the audience
  - Presentation, Demo application, …
- Maximum 3 minutes
- Clear and concise research outline:
  - Why? Is there a problem?
  - Method? How did you tackle the challenge?
  - Data? What data did you use?
  - What? Which applications can be realised?

Schedule

	Monday, 17 June	Tuesday, 18 June	
09:00	Opening	Administration and Recap of Day 1	
10:00	Linked Data and the Semantic Web: Basics	Triple Stores: Introduction	
11:00	Coffee & Discussions	Coffee & Discussions	
12:00	Ontology Development	Geometry	Coding with Linked Data: Jena
13:00	Lunch	Coding with Linked Data: NodeRED	Coding with Linked Data: RDFlib
14:00	Introduction to Querying Linked Data	Lunch	
15:00	Coffee & Discussions	Geospatial	Linked Building Product Data
16:00	Linked Building Data: Examples & Tools	Hackathon	
17:00	Kickoff Coding Challenge		
18:00	Hackathon on Coding Challenge		
19:00			

Wednesday
19 June
17:30 - 18:30:
+ Prize
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Content

- Content as Jupyter Notebooks
- Wifi connection + webbrowser
- Passive -> Index.ipynb
- Active -> mybinder.org or Google Colab
- Rapidly:
  1. Getting Started: Check if everything works
  2. Guided Programming: Do It Yourself programming on real world examples
  3. Topics of coding challenge: Real world research problems you will work on with your group

>>> https://github.com/linkedbuildingdata/SummerSchoolOfLDAC/ <<<

Guided Programming

- 01-00 Program your TBox
- 01-01 Program your ABox
- 01-02 Query a knowledge-base with SPARQL

Topics for Coding Challenge and Hackathon

- 02-00 Publish Smart Home Sensor Data using SWT
- 02-01 Integrate heterogeneous building product data
- 02-02 Automated Ontology Matching in the Built Environment
- 02-03 Extraction and Semantic Annotation of Geometry Data from IFC
- 02-04 Generation of 3D Virtual Reality Scene from Linked Building Data
- 02-05 Open Data Model for AEC Industry

Topic Pitch

Publish Smart Home Sensor Data using SWT

Lecturer: Georg F. Schneider

Topic Pitch

Integrate heterogeneous building product data

Lecturers: Anna Wagner, Georg F. Schneider

Topic Pitch

Automated Ontology Matching in the Built Environment

Lecturer: Georg F. Schneider

Topic Pitch

Extraction and Semantic Annotation of Geometry Data from IFC

Lecturers: Mathias Bonduel, Kris McGlinn, Anna Wagner

Topic Pitch

Generation of 3D Virtual Reality Scene from Linked Building Data

Lecturer: Walter Terkaj

Topic Pitch

Open Data Model for AEC Industry

Lecturers: Pieter Pauwels, Reinder Peterse, Chelly Peterse-Fraanje

Grouping

Register your group here: https://tinyurl.com/y6noxo6m

Group up! Enjoy!

Let’s get this started...