Team Project Offerings for Spring Semester 2017

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Agenda

- **Project A)**
  Data Analytics in Software Development Projects: How can Pattern Recognition help to Innovate Design Centric Software Development?

- **Project B)**
  Predicting Online Shoppers’ Behaviors Using SAP Hybris and Yaas.io

- **Project C)**
  Amazon Echo: Analyze and Optimize Voice-based User-Machine-Interaction by Building your own Amazon Echo
A) Pattern Recognition in Design-driven Development
A) Pattern Recognition in Design-driven Development

- Essential part of the process are scribbles
  - Acquired from customers and stakeholders
  - First drafts and ideas / illusions / wishes
  - Foundation of the entire development process
A) Pattern Recognition in Design-driven Development

- How scribbles are used today...
A) Pattern Recognition in Design-driven Development

- YOU can bring the magic in!

- Have a look at Google’s lab and get some ideas...
A) Pattern Recognition in Design-driven Development

- You bring the magic in!

VIDEO:

https://www.youtube.com/watch?v=X8v1GWzZYJ4
A) Pattern Recognition in Design-driven Development

- Environment
  - Full suite of scribbles from different software projects
  - Meta-Data per scribble and project available
  - Integrated in company context

- Goals
  - Deep dive into data science and machine learning
  - Design and develop a neural network for detecting recurring patterns in scribble making
  - Deploy it to a productive software development environment
A) Pattern Recognition in Design-driven Development

- Project Parameters
  - Prerequisites:
    - Interest in Pattern Recognition and Data Science
    - Programming Skills will help
  - Participants: 4 – 8
  - Language: German / English
  - Duration: 6 months
  - Very well suited for MMDS
B) Online Shoppers‘ Behaviors with YaaS microservices

- YaaS.io is a commerce as a service provider
- YaaS offers microservices for innovative businesses
B) Online Shoppers’ Behaviors with YaaS microservices

- What can you do with YaaS.io?
  - Implement a powerful webstore with
    - Multiple sites (countries)
    - Customer Management
    - Language Support
    - Customer & Order Management
    - Shipping Methods
    - Discounts / Coupons
    - Loyalty Support
B) Online Shoppers’ Behaviors with YaaS microservices

- What is so fancy about it?

>>> Its powerful API <<<
B) Online Shoppers‘ Behaviors with YaaS microservices

- How is that involved with online shoppers‘ behaviors?
  - Questions that intrigue every online retailer:
    - Which products can be recommended?
    - Does the presentation of my products support buying intents?
    - Is the price supportive for higher online revenue?
B) Online Shoppers‘ Behaviors with YaaS microservices

- Environment
  - Full access to YaaS.io microservices
  - Support by a large retailing company

- Goals
  - Setup a comprehensive virtual online shop
  - Develop prediction models for online shoppers‘ behaviors
  - Test models in real online shopping environments
B) Online Shoppers’ Behaviors with YaaS microservices

- Project Parameters
  - Prerequisites:
    - Interest in Data, Programming and Web Technologies
  - Participants: 4 – 8
  - Language: German / English
  - Duration: 6 months
  - Very well suited for MMDS
C) Amazon Echo – Alexa

- Amazon Echo is a VUI (voice-user-interface)
- Handles general skills, custom skills and smart home skills
- Allows simple adding of custom skills with minimal programming
C) Amazon Echo – Alexa

VIDEO:

https://www.youtube.com/watch?v=7iKD0BQp2uc
C) Amazon Echo – Alexa

- Amazon is not only providing such cool devices but also the voice recognition service.
- This enables for using the Echo technology in multiple different devices...
- For example on a RaspberryPi computer!

- Even libraries for accessing Amazon’s voice service are available.
C) Amazon Echo – Alexa

- Environment
  - Alexa and RasPi devices will be provided
  - Lab room for real VUI tests and scenarios

- Goals
  - Build your custom Echo device on the RasPi platform
  - Integrate libraries for connecting to Amazon Echo service
  - Run usability and acceptance tests and improve user experience
C) Amazon Echo – Alexa

- Project Parameters

  - Prerequisites:
    - Interest in Hardware, Data and Voice-Uis
    - Programming Skills will help
  - Participants: 4 – 8
  - Language: German / English
  - Duration: 6 months
  - Very well suited for MMDS
We provide you with necessary infrastructure and partners:

http://mobile-innovation-lab.uni-mannheim.de
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