Group-6 Assignment IN5480

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Main Motivations

- Understand HCI and Machine Learning from an different **Angles**
- Master thesis in Machine Learning and AI

Questions

suggested by the Group

- *How to tackle ambiguity in AI and Human interactions?*

- *What is the processes and the techniques should have presupposed to enhance an AI's capabilities?*

Observations

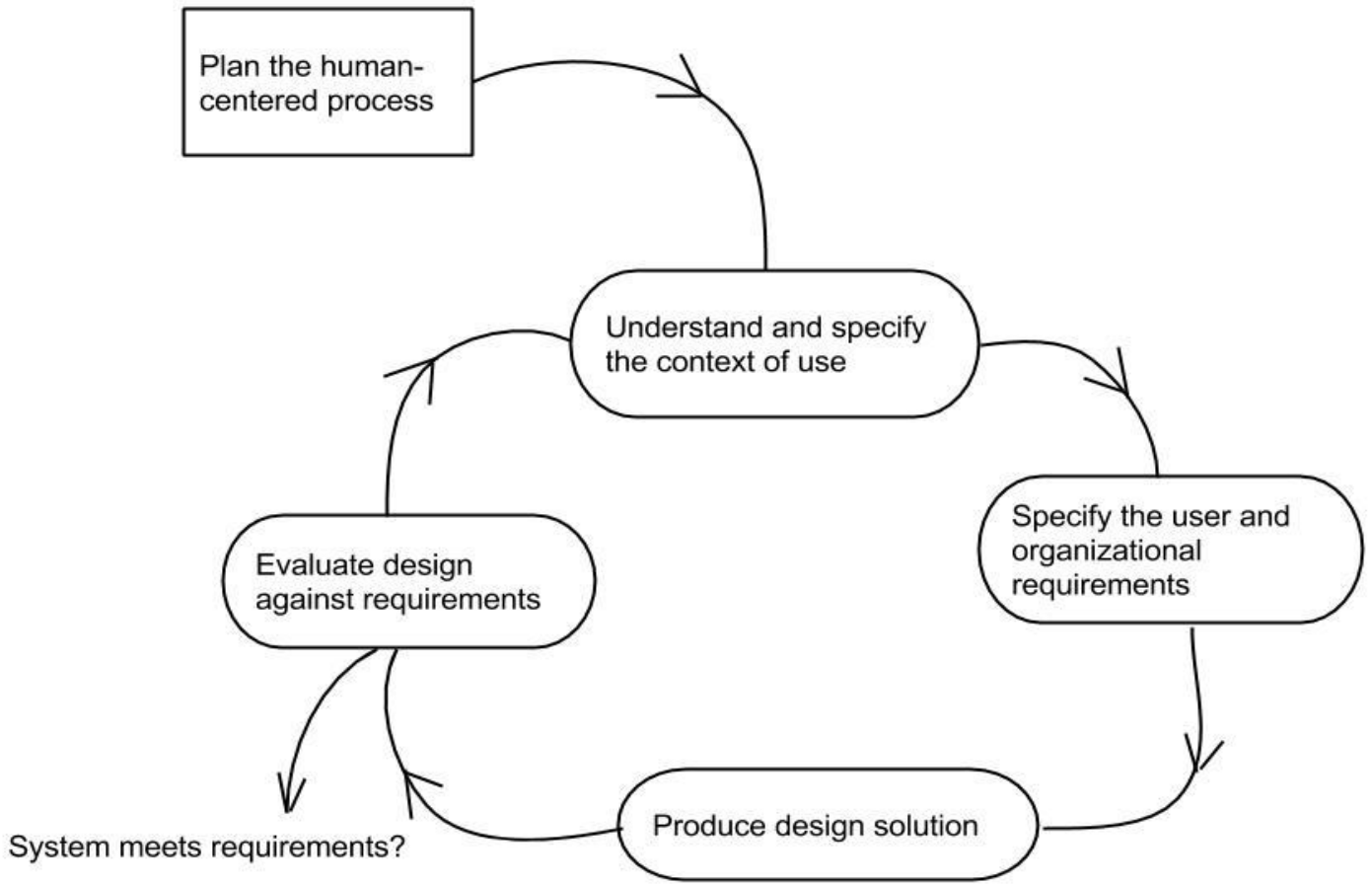
Key points:

1. Task Complexity
   - Users understanding of the task
   - Task-Complex relativisms
2. Post Task Evaluation Satisfiability
   - How the user perceives the outcomes
3. Reasonable Expectations
   - A sum of previous mentioned

Methods and Progress

- Literature background
- Testing different applications, like Siri
- Extract Unknowns
- Implement them in real-live scenarios with tasks and challenges
  - With the help of set of Questionnaires
- Development of the Chatbot during this assignment: Scheduler-Bot
  - Used IPhone Siri as application model

Design Implementation Process



Scheduler Bot

- 1. Scheduling application
- Connected to
  - System’s Calender
  - Email System
- Simple and Understandable UI
- Self learning (Under-Constructions)
  - Implementing Machine Learning Framework
- Single purpose but Multitasker
- Implemented on Slack from Google dialogflow
  - Previous try out on .NET framework: Microsoft Bot Framework

Discussion

Lesson learned On Human – AI Interactions:

1. Task Complexity
    1. Build up knowledge base
    2. Understand capability
    3. That is reduce the UI complications and place complexity in the backend as much as possible
2. User Satisfiability
    1. Understand the outcome, understand what have done during the task is much more important
3. Reasonable Expectations
    1. Understand task and recognize expectation as it should

Technical Outcomes

- 1.Natural Language Processing
  - Formal conversation vs informal conversation
    - Dialog vs. Commando based

- Machine Learning
  - Comprehensive data collections
  - Algorithms
    - Pattern searches in the conversation context

  - Feed The Bot
    - To help the bot to learn
      - Classify Knowledge

Conclusion

- Better understanding and clear distinction between designing usability and corresponding technical implementation

- Much clear understanding on how HC interaction works and building an effective collaboration