On the Challenges of Translating NLP Research into Commercial Products

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PUBLIC
Innovation = Novelty + Impact
Challenges to Innovation

- Lack of value focus
- Lack of Reproducibility
- Lack of (Domain) Data
- Overemphasis on test scores
- Difficulty of adoption
- Timelines
Challenges to Innovation

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From Business Problem to NLP Problem
The “cheat sheet”

- **What is the “job”?**
  - Yes: **Do you need automation?**
    - Yes: **Can you write the rules?**
      - Yes: Can you formulate your problem clearly?
    - No: Manual work
  - No: Refine your problem

- **Do you have data?**
  - Yes: **Do you have a regular pattern?**
    - Yes: **Do you have meaningful features?**
      - Yes: Can you measure success
    - No: Collect data
  - No: Enhance data / look for different data sources

- **Can you formulate your problem clearly?**
  - Yes: Rule-based
  - No: Refine your problem

- **Can you measure success?**
  - Yes: NLP
  - No: Refine your problem

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Appendix
SAP’s vision for enterprise machine learning

**SAP Leonardo**
Machine Learning
Create your own intelligent infrastructure

**Automate Knowledge Work**
- Transformational **HR** services
- Lights out **finance** operations
- Self-driving customer **service**
- Conversational **sales bots**
- Customer **retention** insights

**Do the Impossible**
- Image-based Ariba **commerce**
- Contextual Concur **travel concierge**
- Video-aware **marketing**
- Visual **store execution**
- Drone and satellite-based **asset management**
- Vision-enabled **manufacturing**
- Contextual **logistics**

**SAP Cloud Platform and SAP HANA**
Build your intelligent enterprise now
SAP makes machine learning incredibly simple

SAP Assets

76% of the world’s transaction revenue touches an SAP system

25 industries

12 lines of business

The world’s largest business network

SAP Leonardo
Machine Learning

Applications/tools

Business Services

Training and Lifecycle management

Functional Services

SAP Cloud Platform and SAP HANA

Business Outcomes

Increase revenue with superior sales targeting and execution

Re-imagine business processes with digital intelligence

Improving quality time at work for employees

Increased customer satisfaction with superior service

Enabling product, process and business model innovations