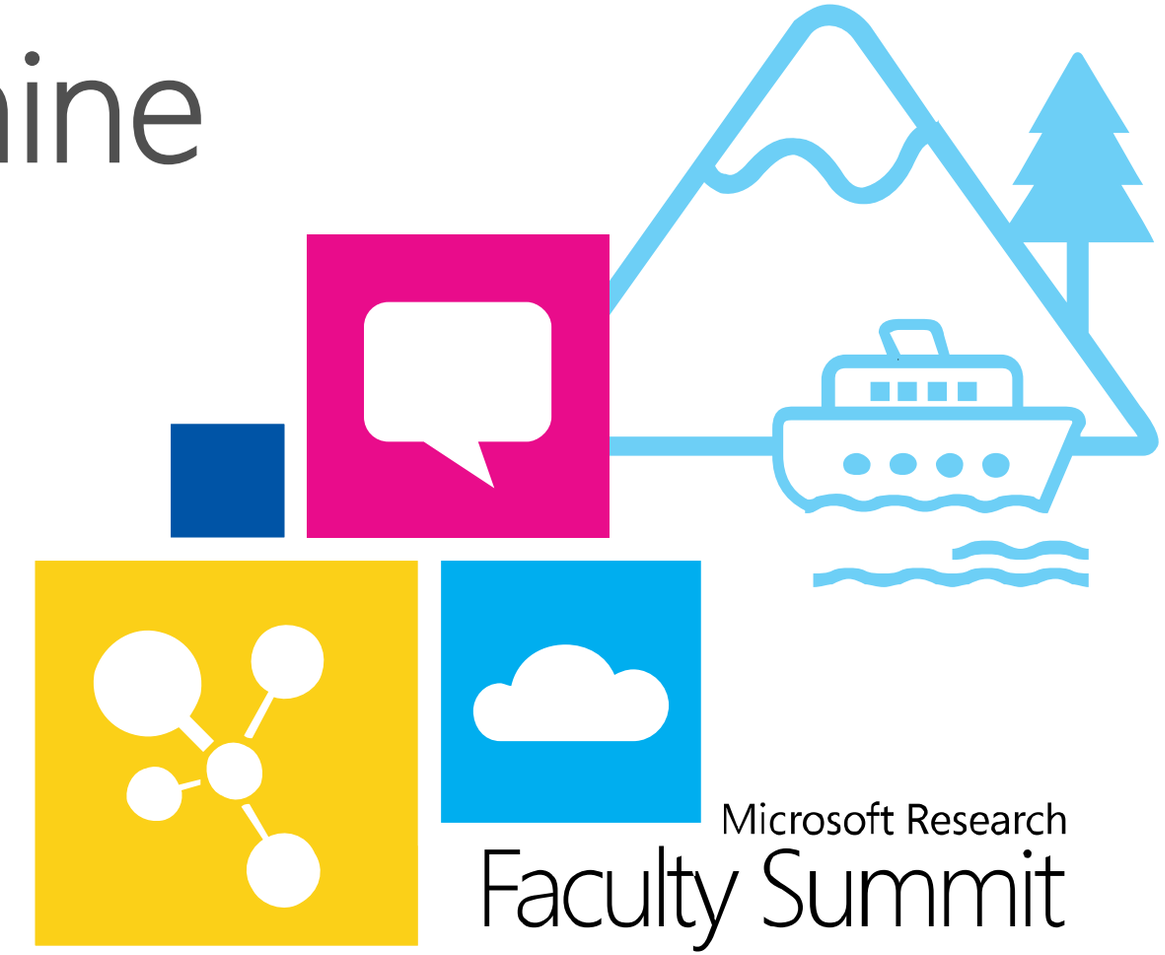
Microsoft

Microsoft Research Faculty Summit 2013

Microsoft

Interaction for Machine Learning

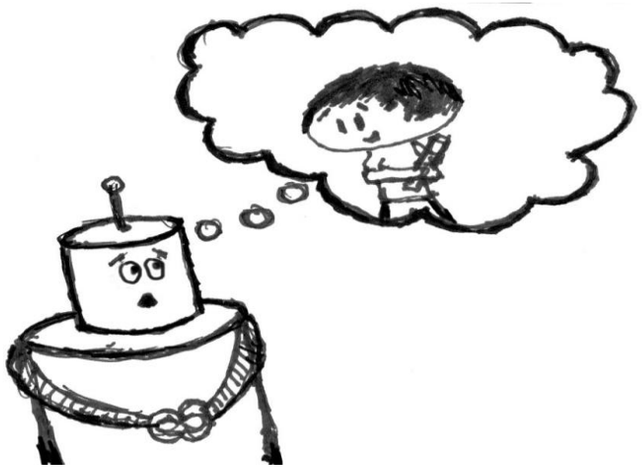


Co-organizers: Dan Bohus, Ece Kamar, Ashish Kapoor, Lihong Li, Jason Williams

Microsoft Research Faculty Summit

Who's Helping Who?

- Human Helping the Machine
  - Providing labels, preferences and guidance



- Machine Helping the Human
  - Amplifying human capabilities, direct information acquisition

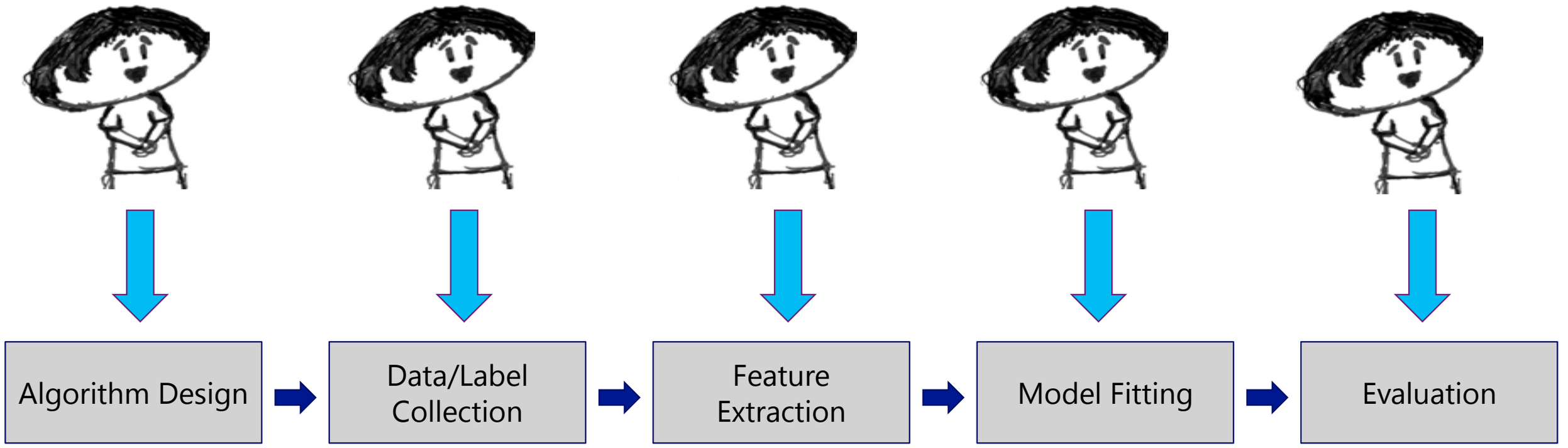
What is “Interaction for Machine Learning”?

Modify behavior of a machine learning method by interacting with it.

Beyond Label Elicitation :

Automated Spam Filter vs. A Personal Assistant

What is “Interaction for Machine Learning”?



Human as a labeler

Human as a computational processor

as a designer

Regression

Metric Learning

Active Learning

Ensemble Methods

Combination

xplorer

Our Speakers

James Fogarty, University of Washington

Lise Getoor, University of Maryland

Patrice Simard, Microsoft Research

Xiaojin (Jerry) Zhu, University of Wisconsin-Madison

Agenda

Short talks by our speakers, followed by discussion and question/answer session:

1. *Jerry Zhu*
2. *Lise Getoor*
3. *James Fogarty*
4. *Patrice Simard*

Goal is to be more discussion oriented, so please ask questions

Interaction and ML Panels

Panel 1: Interaction for Machine Learning

James Fogarty, University of Washington; Lise Getoor, University of Maryland; Patrice Simard, Microsoft Research; and Jerry Zhu, University of Wisconsin, Madison

1:00 pm to 2:30 pm, Cascade (***This Session***).

Panel 2: Machine Learning for Interactive Systems

Dan Bohus, Microsoft Research; Léon Bottou, Microsoft Research, Michael Littman, Brown University; and David Traum, University of Southern California

2:45 pm to 4:15 pm, Cascade