CS583 – Probabilistic Graphical Models
Spring 2014

Topic: Project
Date: 2/17

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Project

- Objective: to give you real-world experience
- Three types: from less freedom to most freedom
  1. Implement a project that I assign: Python is required
  2. Make a contribution to an existing open-source probabilistic graphical model project
  3. You propose your own project, you have complete freedom. This is good if you have a research project that you want to apply PGMs for.
- All three types require
  - Data, coding, experiments, analysis, report

Type I

- Implement various ICA approaches using Python
- Allowed packages: scikit-learn, scipy, and numpy
- Additional packages require permission
- Compare content-only classifier and various ICA approaches on a number of networked datasets

Type II

- Make a contribution to an existing open-source probabilistic graphical model project
- You choose which project you want to contribute to
- A candidate is pystruct
  - https://github.com/pystruct/pystruct
- You are free to choose others
- You need to discuss with me which project and what contribution you are planning to make
  - An appointment is necessary

Type III

- You propose your own project, you have complete freedom over the problem, the datasets, and the programming language
- This is good if you have a research problem that you want to solve using PGMs
- You need to discuss your project with me
  - An appointment is necessary

Requirements

- A proposal by Feb 23rd
  - Type I
    - Just a statement that you will be pursuing this project
  - Type II:
    - Describe the project, your planned contribution, the datasets, baselines, and evaluation plan
  - Type III:
    - Describe the project, your planned approach, the datasets, baselines, and evaluation plan

Requirements

- An appointment between February 24th and 28th
  - Required for only Type II and III
  - Send me an appointment request by email at least 24 hours in advance

Requirements

- A progress report by March 31st
  - Discuss your progress so far, initial results, and any obstacles

Requirements

- A final report by April 30th
  - A paper that includes abstract, intro, related work, approach, experimental results, conclusions, and future work

Requirements - Summary

- Proposal – due February 23rd
- Appointment – between 02/24 – 02/28
- Progress report – due March 31st
- Final report – due April 30th