

Bachelor Class 2015-2016

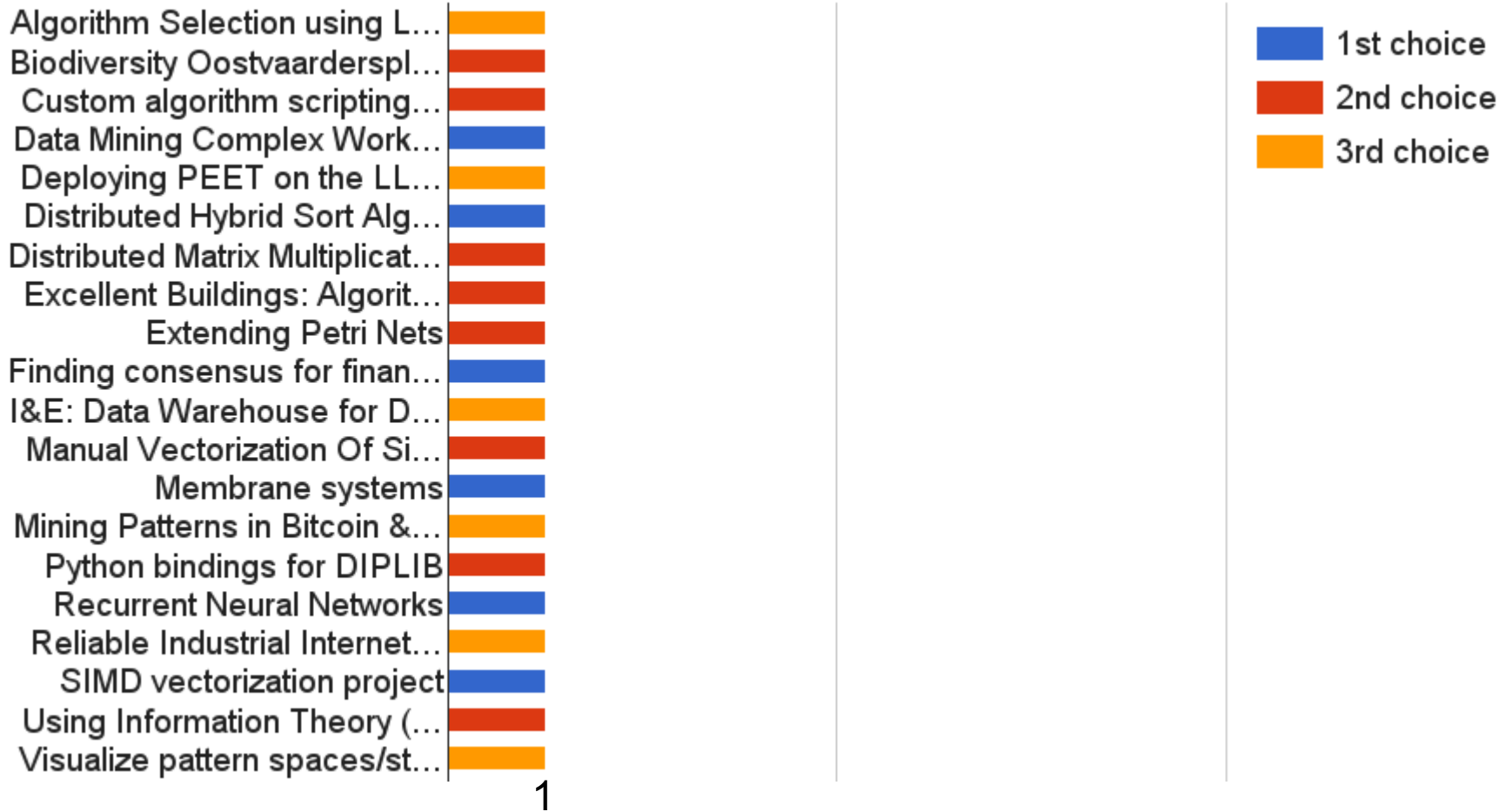
Siegfried Nijssen

11 January 2016

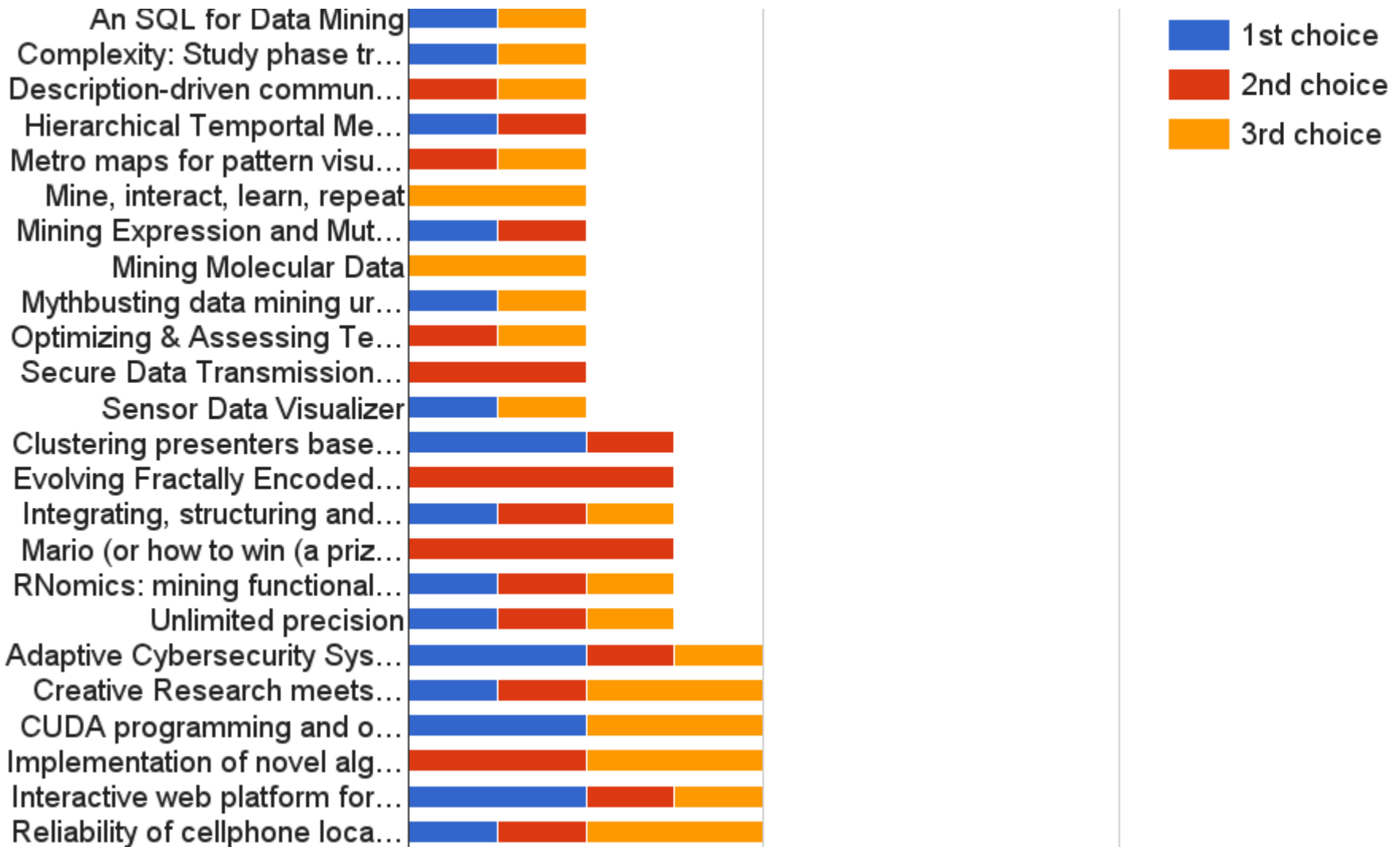


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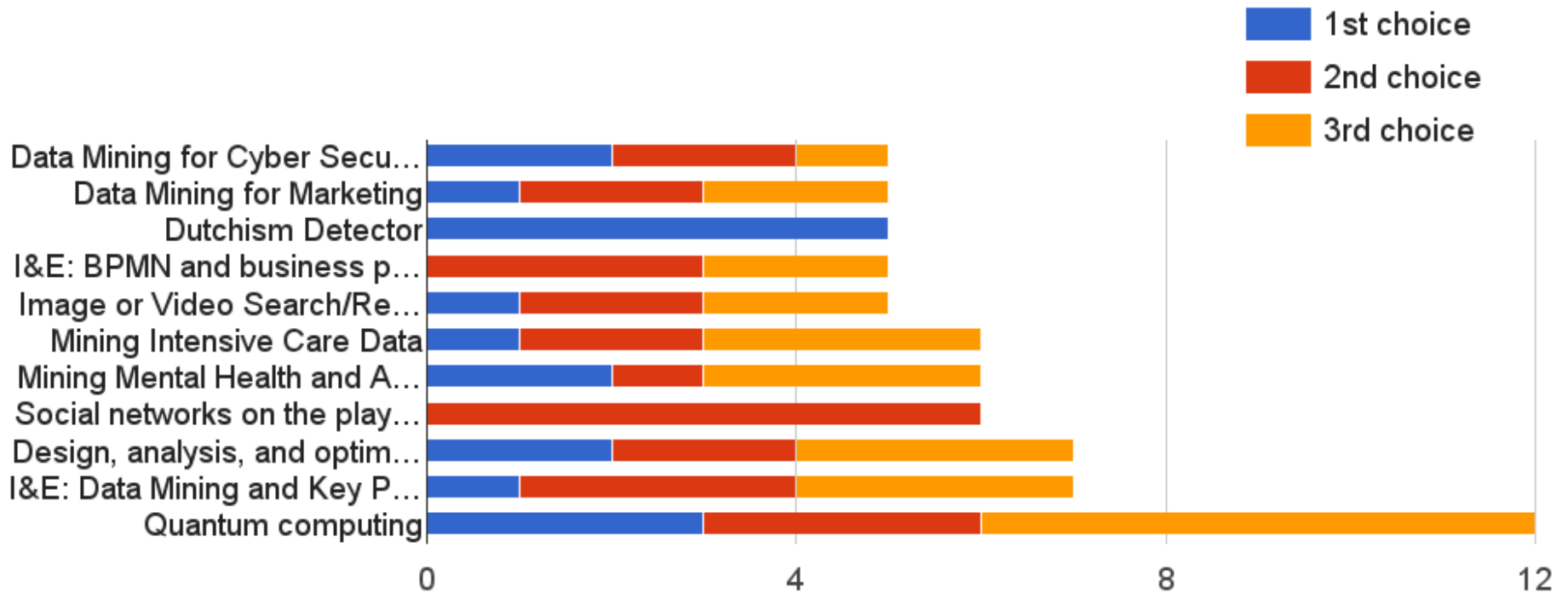
Popularity of Topics



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Assignment of Topics

- I contacted all supervisors with the first choices
- Most supervisors made a choice between the first choices
- I contacted all students that could be allocated to their first choice
- Some students are still unassigned; discussions with supervisors ongoing
 - Contact me after the bachelor class

What's Next

- Define the topic of your thesis in more detail in collaboration with your supervisor
- Fill in a bachelor contract by January 31, 2016
- Ask your supervisor for background information (papers to read, existing software to check out)
- Prepare a poster about the topic of your thesis

Bachelor Contract

Bachelor Project Contract 2015-2016 - Chromium

Bachelor Project Contract 2015-2016 - Chromium

liacs.leidenuniv.nl/~nijssensgr/bachelorklas-2015-2016/contract.html

Bachelor project contract 2015-2016 [+](#)

The signatories hereby agree upon the following terms.

The bachelor project will be concluded with:

1. a written report
2. an oral, public presentation in the bachelorklas

The bachelor project report will at least contain:


1. a clearly defined problem statement
2. a description of the methodology followed
3. conclusions based on the project work
4. an overview of the documentation or references used

Student Name

Student Number

Programme

- Informatica
- Informatica & Economie



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Elements of the Bachelor Contract

- Your name, student number
- The name of your supervisor
- Title of the project
- Research question
- Methodology & work plan
- Deliverables of the project

Research Question

- A research question is a question: it is a question to which you (and your supervisor) do not know the answer
- Finding a good research question is **not** easy

“A good researcher is a researcher that is able to ask the right question.”

Research Question

- Research questions should not be too general, but also not too specific
- Examples of questions that are too general:
 - How can we solve chess more efficiently?
 - How can we determine the location of mobile devices?
 - How can we predict whether a patient in a hospital will need a blood transfusion?
- Examples of questions that are too specific:
 - Can the Quicksort implementation included in the C++ standard library of Linux machines at the LIACS be used to sort the names of all students at LIACS within 10s?

Research Question

- Questions that strike a balance between general and specific:
 - Can the MiniSAT solver be used to find the best move in a game of checkers with 20 pieces on a 6x6 board?
 - Can the location of a mobile device be determined with at most a 100m distance error in the inner city of Leiden, using only WiFi information?
- Coming up with such a detailed question can be challenging if you are just starting

Research Question

- To avoid too generic questions at once, it can be useful to ask multiple questions
- The following series of questions is an example:
 - Which data is available in the intensive care unit of the LUMC that can be used to predict whether a patient needs a blood transfusion?
 - Which are the most promising algorithms to perform such a prediction, based on a conceptual evaluation of the algorithms and the data?
 - Does the most promising algorithm in this conceptual evaluation also perform well in practice?

Work Plan

- Describes the steps that are needed to answer your question(s)
- Note that if you ask step-wise questions, the work plan is clear
- Make sure you include:
 - Reading the literature
 - Performing a conceptual analysis
 - For some projects:
 - Collecting data
 - Performing experiments

Deliverables

- Examples of deliverables are:
 - A thesis
 - Source code
 - Compiled code
 - A running web service
 - Data

Actions to take

- Contact your supervisor
- Have a meeting with him or her
- Make a draft of the contract
- Discuss the draft with him or her
- Submit the contract

Questions?