



VIS: OPTICS_{vis}

Milestone 4

Group 11

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Fakultät für Informatik

Agenda

1. Project definition

Motivation

Users and Tasks

2. Approach

3. Demo

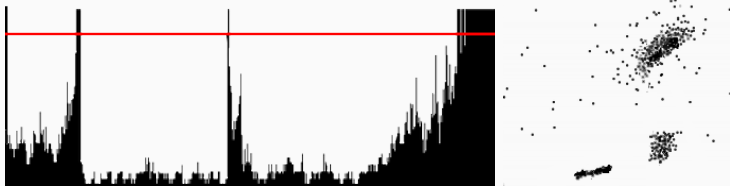
4. Results

5. Analysis

Project definition

Project motivation

- OPTICS: density based clustering
 - algorithm jumps between points in some order
 - records jump distances
 - output somewhat hard to read
 - point order
 - a list of numbers
 - staple visualization method: the bar chart
 - parameterization?
- more thorough and interactive visualization: OPTICSvis



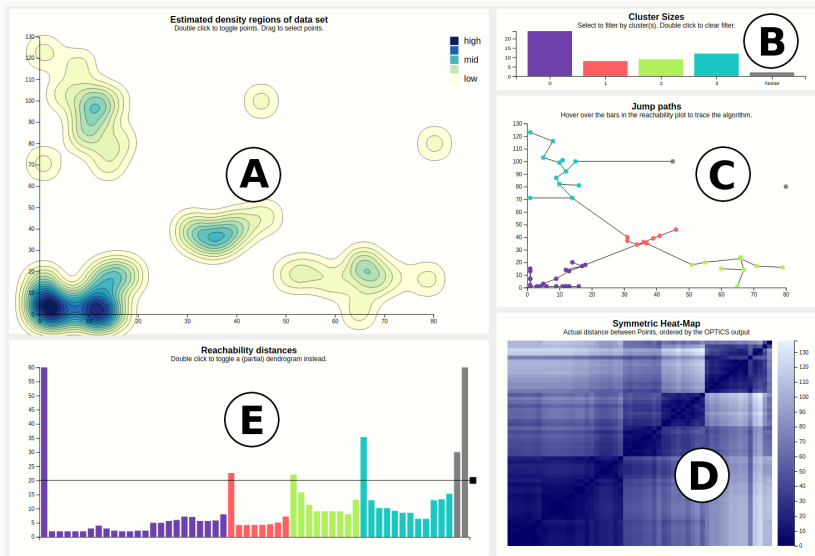
Users and Tasks

- users
 - teaching personnel
 - researchers
 - anyone
- tasks
 - exploration
 - education
 - testing

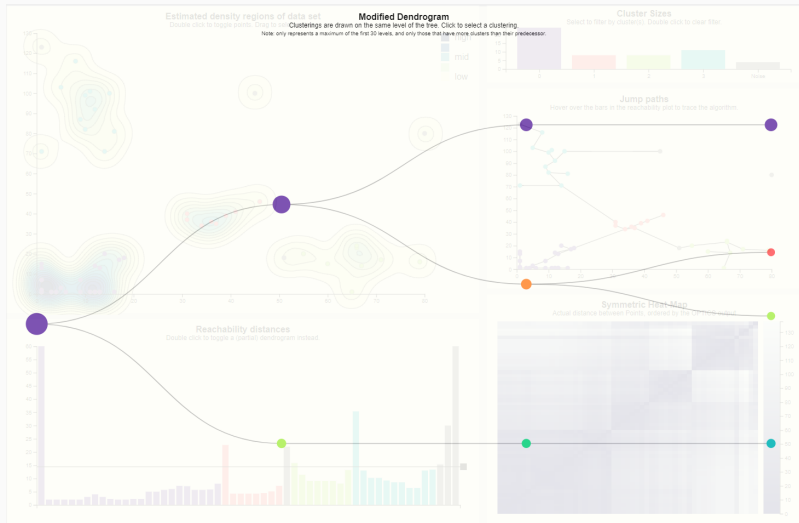
Approach

- static views (w/o interactive elements) provide an overview
- interaction can be used to filter or show more details on demand
- OPTICS is density-based: visualize densities
- make reachability chart interactive: draggable cutoff bar
- heat map makes cluster structures easier to see
- allow user to trace the algorithm
- attempt to visualize hierachy

Implementation



Implementation



Demo

Results

- feedback overall favorable
- secondary cutoff bar was considered superfluous and confusing, removed in final prototype
- performance issues were prominent
- people tended to use the tool in a very superficial way, not very conclusive
- OPTICS basics needed to be taught beforehand

Analysis

- strengths
 - + quick exploration of different aspects of OPTICS
 - + good companion for teaching OPTICS
- weaknesses
 - some previous knowledge of OPTICS needed
 - multidimensional data visualization could be improved
 - performance issues

Thanks for your attention!