

Data Visualization

A new module for BEXIS 2

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Motivation

Visualization is a

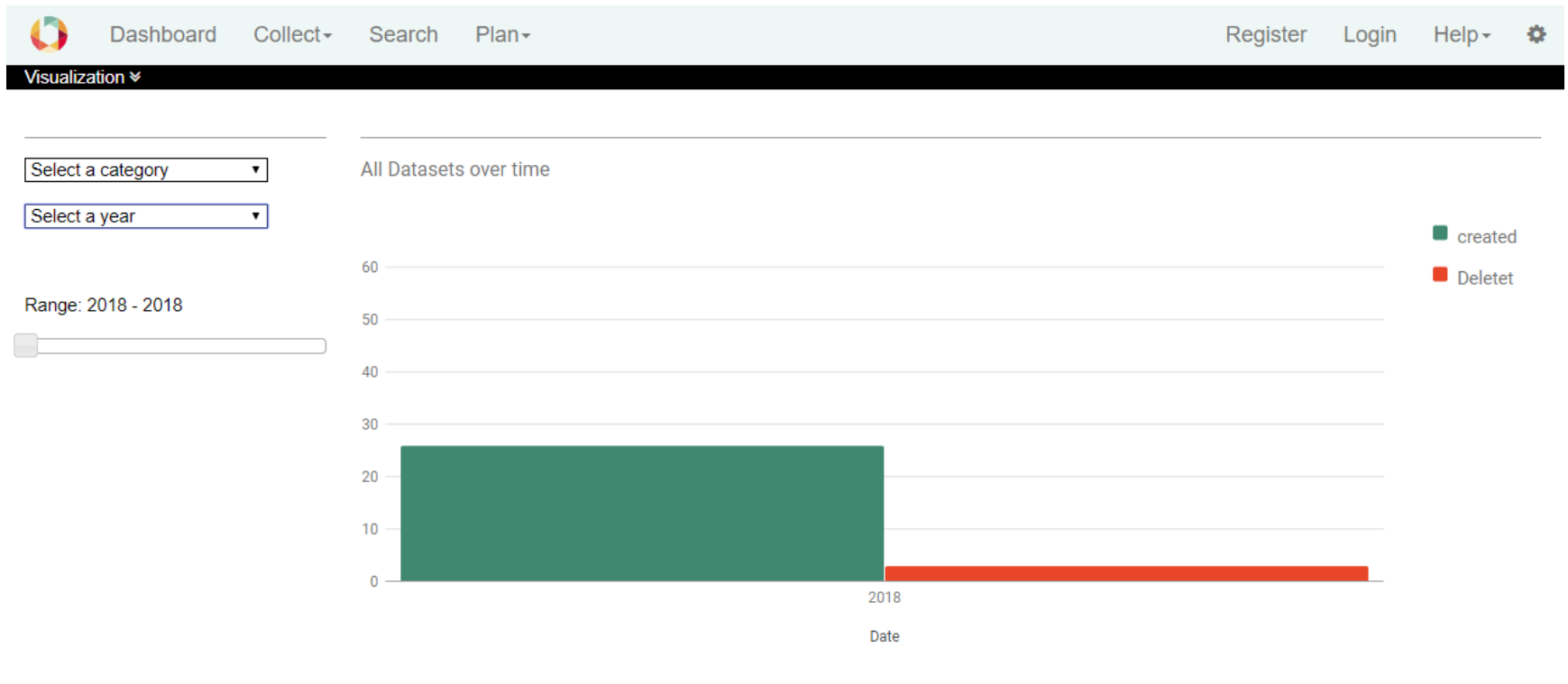
- common way to represent data
 - easy comprehensible form
 - feature of BEXIS 2
-
- Visualization for BEXIS2 is the theme of the project work in my master program

Outline

- Current Version
 - **Visualization for administrator**
- Technical part
 - **Implementation the Visualization Module**
- Future works
 - **Visualization for scientists**

Current Version

Current Version

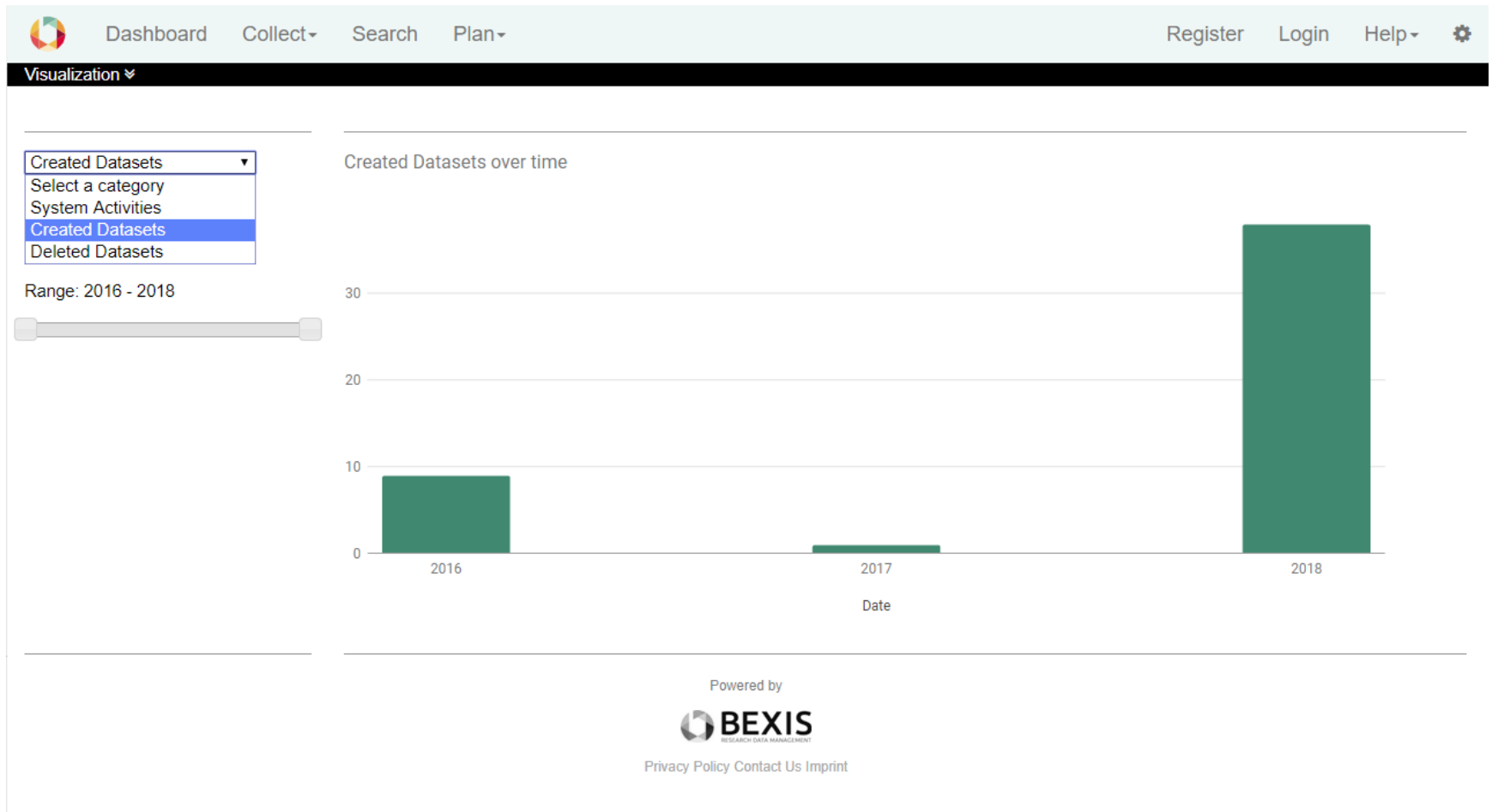


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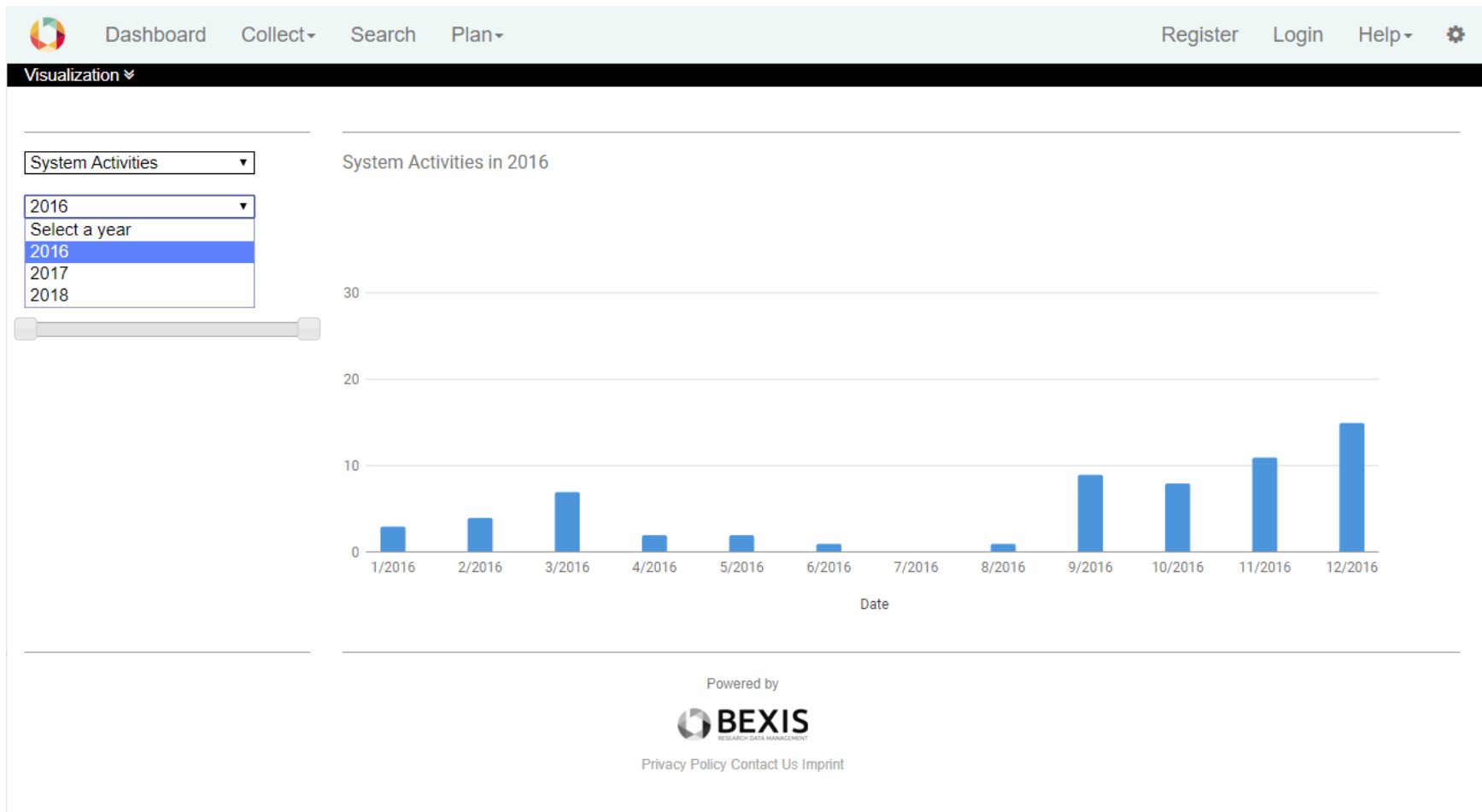


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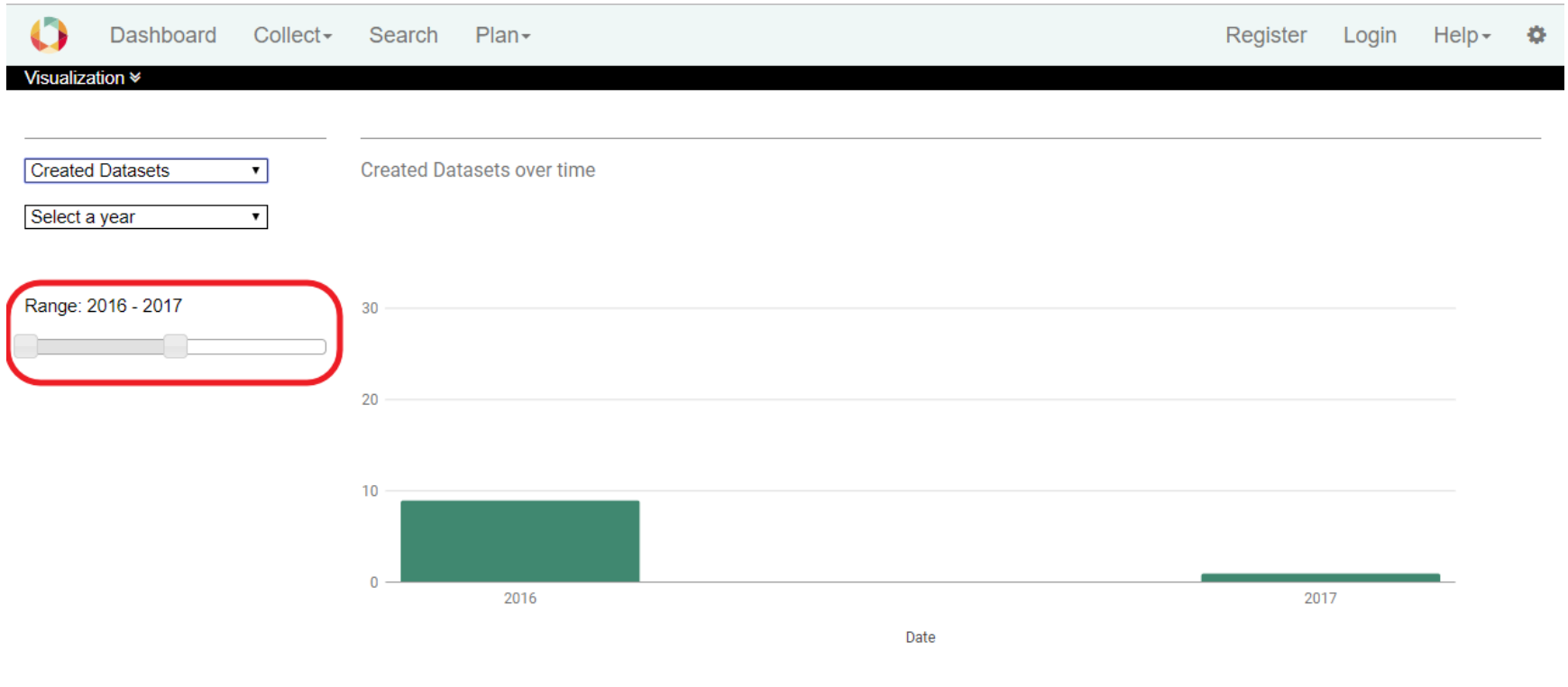
Current Version



Current Version



Current Version



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Module Implementation

Module Implementation

- BEXIS Modularity
- Server side
 - Programming language C#
 - Model-View-Controller (MVC)
 - BEXIS API usage
- Client side
 - HTML 5 / JavaScript / JQuery
- Google Charts

Google Charts or not Google Charts

	Google Charts	D3	D3Plus	C3
Technology	JavaScript library	JavaScript library	D3-based library	D3-based library
Free / Open Source	✓	✓	✓	✓
Data Input	Array, JSON	JSON, CSV, TSV	JSON, CSV, TSV	Array, JSON
Data Output	HTML, SVG	HTML, SVG	HTML, SVG	HTML, SVG
Rich Gallery	✓	✓	✓	✓
Customization	✓	✓	✓	✓
Last Update	23.02.2016	24.08.2018	21.08.2016	08.08.2018

Future works

Visualization ideas

- Metadata completion

The screenshot displays the BEXIS web interface for dataset 't4'. The top navigation bar includes 'Dashboard', 'Collect', 'Search', and 'Plan'. The user 'nafiseh' is logged in, and there is a 'Help' menu. The dataset is identified as 'BEXIS RC4 - Show Data : t4'. Below the dataset name, there is a 'Download' button and a pie chart showing the status of the dataset: 'Filled' (orange) and 'Empty' (blue). The 'Metadata' tab is selected, showing a form for 'Basic' and 'Technical Contacts' information. The 'Basic' section is expanded, showing fields for 'Name' (Nafiseh Navabpour) and 'Address' (Jena Germany). The 'Technical Contacts' section is also expanded, showing a 'Technical Contact (1)' entry with the same name and address. The interface includes buttons for 'Edit', 'Copy', and 'show all fields'.

Visualization ideas

- Data completion/distribution

Dashboard Collect Search Plan nafiseh Help

BEXIS - Show Data : flower visitor interactions 2007 Schwäbische Alb

Displaying items 1 - 20 of 20

Plot_ID	Plant_species	Date	Sample_number	Order	Family	Species	Female	Male	Unsexed
A23233	Achillea millefolium	7/11/2007 12:00:00 AM	75	Diptera	Tachinidae	Eriothrix rufomaculatus	0	1	0
A23233	Cirsium arvense	7/11/2007 12:00:00 AM		Coleoptera	Nitidulidae	Meligethes cf. aeneus	0	0	4
A23233	Cirsium arvense	7/11/2007					0	0	1
A23233	Achillea millefolium	7/11/2007				ombus humilis	1	0	0
A23233	Trifolium pratense	7/11/2007				ombus humilis	1	0	0
A23233	Ranunculus acris	7/11/2007				sioglossum pauxillum	0	0	1
A23233	Ranunculus acris	7/11/2007					0	0	1
A23233	Ranunculus acris	7/11/2007					0	0	0
A23233	Agrimonia eupatoria	7/11/2007 12:00:00 AM		Diptera	Syrphidae		0	0	1
A23233	Achillea millefolium	7/11/2007 12:00:00 AM		Diptera	Syrphidae	Scaeva pyrastris	0	0	1
A23233	Cirsium arvense	7/11/2007 12:00:00 AM		Diptera	Syrphidae	Eristalis tenax	0	0	1
A23233	Ranunculus acris	7/11/2007 12:00:00 AM	78	Diptera	Anthomyiidae		1	0	0
A23233	Ranunculus acris	7/11/2007 12:00:00 AM		Diptera			0	0	2

Thank you for your attention!

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