

The Interactive Isnalyser

Automation of isnād trees drawing

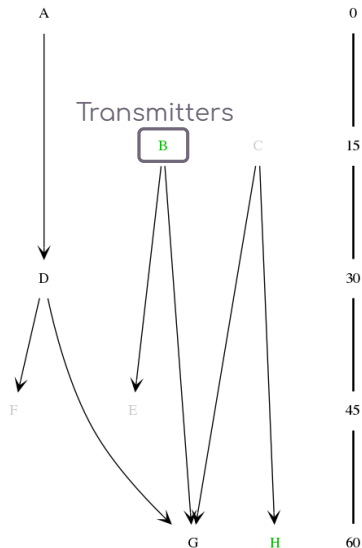
Stefan Wezel, Maroussia Bednarkiewicz, Álvaro Tejero-Cantero

mlcolab @ Tübingen University Cluster of Excellence

January 27, 2021

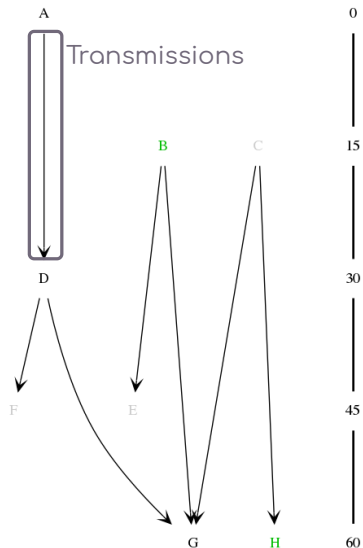
Setting

What is an isnād tree?



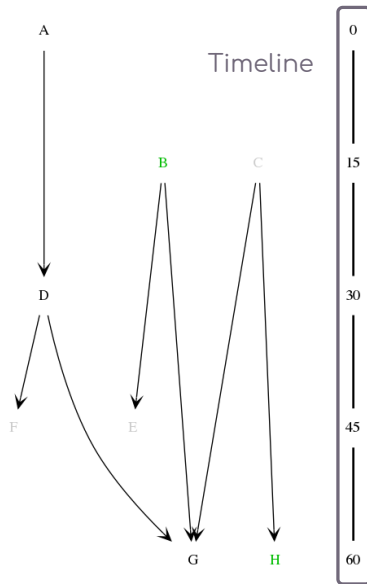
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 - Reproducibility → fair comparison of data
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 - Software library (Python)
 - Web application (Javascript)

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- Two milestones
 - Software library (Python)
 - Web application (Javascript)
- Let's start with the Python version

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- Graphviz
 - Open source tool
 - Draws graphs specified in DOT language

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- Upload to real PyPI and feel good!

Isnalyser

Publishing the library





isnalyser 0.1.0

`pip install isnalyser` 

Create isnad graphs automatically.

Navigation

 [Project description](#)

 [Release history](#)

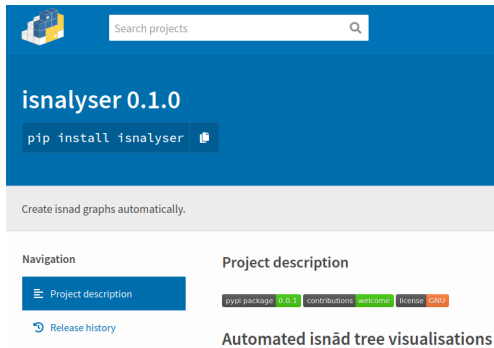
Project description

`pypi package` `0.0.1` `contributions` `welcome` `license` `GNU`

Automated isnad tree visualisations

Isanalyser

Publishing the library



The screenshot shows the PyPI project page for 'isanalyser 0.1.0'. At the top, there's a blue header with the project name and version. Below it, a search bar and a 'Search projects' button are visible. The main content area has a blue background with the project name and version. A button labeled 'pip install isanalyser' is prominent. Below this, a light gray box contains the text 'Create isnad graphs automatically.' The page is divided into two columns: 'Navigation' on the left with links for 'Project description' and 'Release history', and 'Project description' on the right. The 'Project description' section includes a 'pypi package' badge with version '0.0.1', links for 'contributions', 'welcome', and 'license', and a 'license' badge with 'GNU'. Below this, the text 'Automated isnād tree visualisations' is displayed.

Search projects

isanalyser 0.1.0

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Create isnad graphs automatically.

Navigation

- Project description
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Project description

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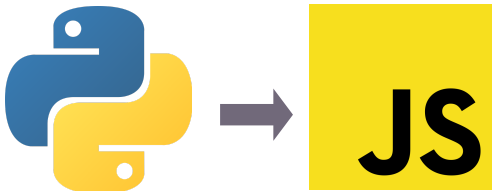
Automated isnād tree visualisations

- If you are interested: Just `pip install isanalyser`
- Documentation on Github

- Using Python library requires coding knowledge
- Limited audience/reproducibility?

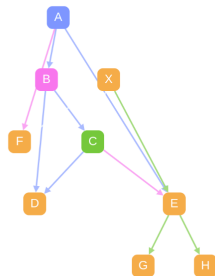
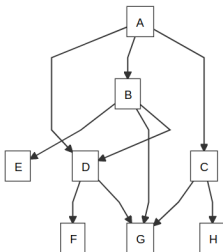
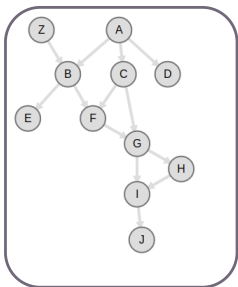
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- Provide more features to interact with graph
- Natural choice: Javascript

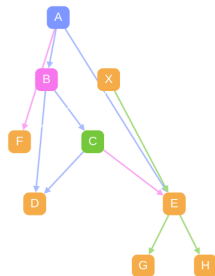
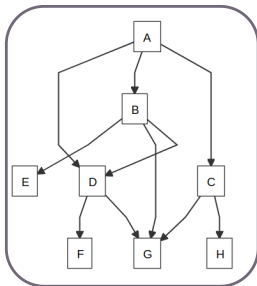
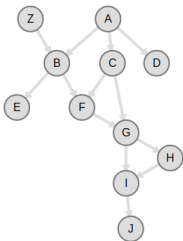


- But which extensions?
- Long phase of exploration

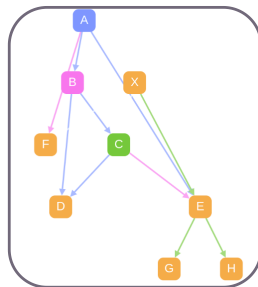
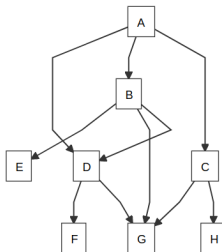
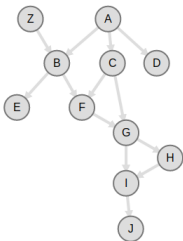
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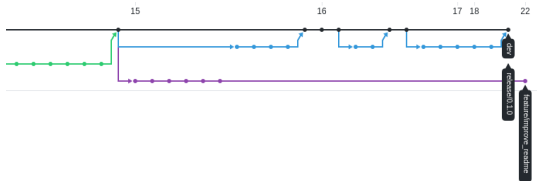
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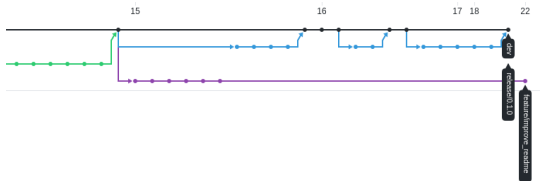
- What do we really want?
 - Edge layout
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 - Add interactive features
 - → Interactive, shiny Graphviz :(
 - Solution: d3-graphviz
 - Direct translations of Graphviz to Javascript with d3-capabilities
 - Combine graphviz layout and d3 visualization/interaction

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 - Main branch
 - Each new feature as new branch
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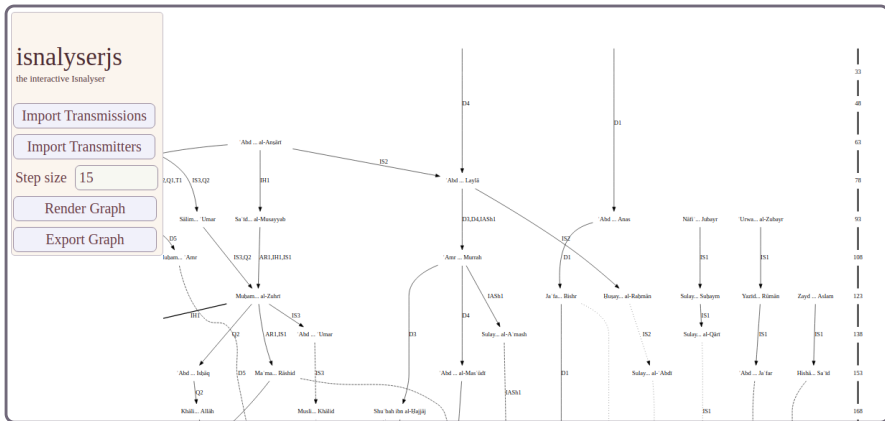


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- Transparent development history
- Always one working version
- Now at version 0.1.0 - ready for first release

A small snippet



Future of the Isanalyser

What is next?

- Publish in Journal of Open Source Software

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What is next?

- Publish in Journal of Open Source Software
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 - Users can upload and share graphs
 - Edit, annotate other graphs
- Beyond isnād trees
 - I.e. citation networks

Takeaways

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What to keep from this project?

- Creating PyPI package is easy
- Git flow helps keeping track and maintaining transparency
- Most important part of the project are users
- Interaction happens on many levels
- If you interested in the isanalysers
 - Try them out
 - File github issues
 - Send us mails
 - Extend the code