

The Interactive Isnalyser

Automation of isnād trees drawing

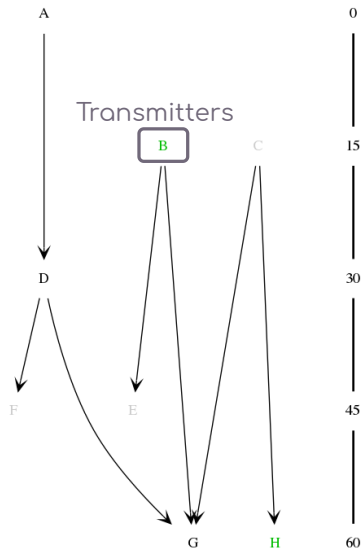
Stefan Wezel, Maroussia Bednarkiewicz, Álvaro Tejero-Cantero

mlcolab @ Tübingen University Cluster of Excellence

April 29, 2021

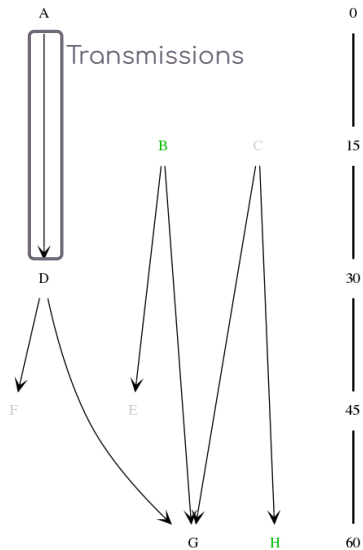
Setting

What is an isnād tree?



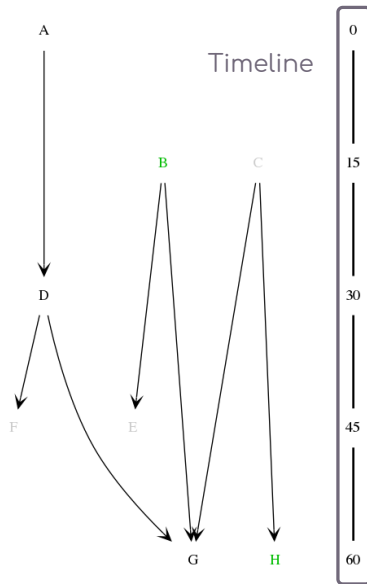
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 - Software library (Python)
 - Web application (Javascript)

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- Two milestones
 - Software library (Python)
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- 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 on Test-PyPI
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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](#)

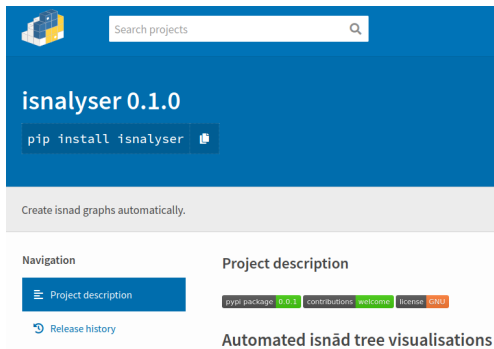
Project description

pypi package **0.0.1** contributions **welcome** license **GNU**

Automated isnād 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 a search bar and a magnifying glass icon. Below the header, the project name 'isanalyser 0.1.0' is displayed in large white text. Underneath, a dark blue button contains the command 'pip install isanalyser' and a small icon. A light gray banner below the button says 'Create isnad graphs automatically.' The main content area is divided into two columns. The left column, titled 'Navigation', has a blue button for 'Project description' and a link for 'Release history'. The right column, titled 'Project description', shows a row of links: 'pypi package', '0.0.1', 'contributions', 'welcome', 'license', and 'GNU'. Below this, the text 'Automated isnād tree visualisations' is visible.

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

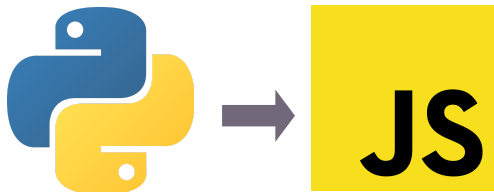
Isnalyserjs

Making the isnalyser more accessible

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

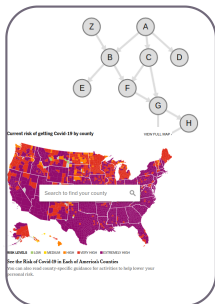
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- Provide more features to interact with graph
- Natural choice: Javascript

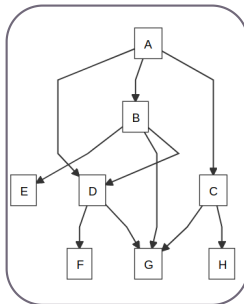
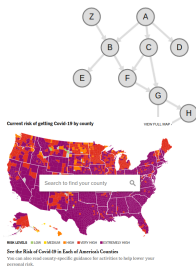


- But which extensions?
- Long phase of exploration

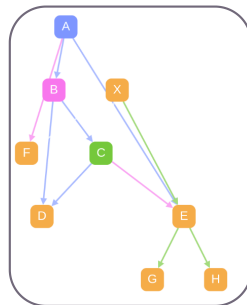
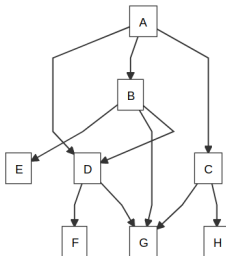
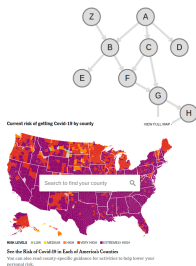
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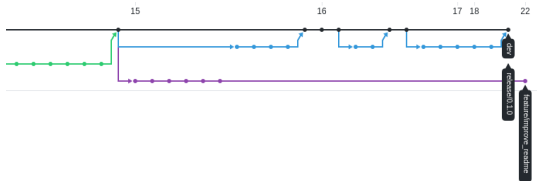
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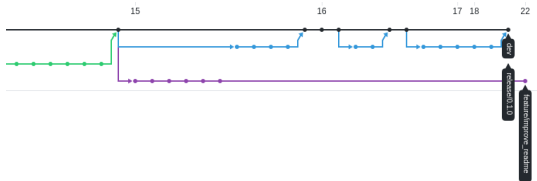
- What do we really want?
 - Edge layout
 - Precise constraints
 - Customize style
 - Add interactive features
 - → Interactive, shiny Graphviz :(
 - Solution: d3-graphviz
 - Direct translations of Graphviz to Javascript with d3-capabilities
 - Combine graphviz layout and d3 visualization/interaction

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- 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
- Transform into collaborative platform
 - Users can upload and share graphs
 - Edit, annotate other graphs
- Beyond isnād trees
 - I.e. citation networks

Takeaways

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- 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