

Zooming Metadata:

A Framework for Facilitating Provenance Exploration

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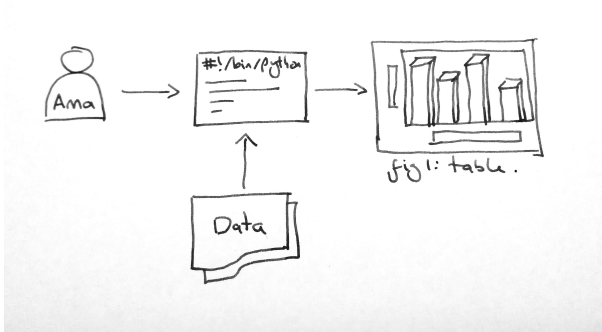
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What is provenance?

- ▶ The lineage of an entity
- ▶ Commonly used in accounting or antique trading

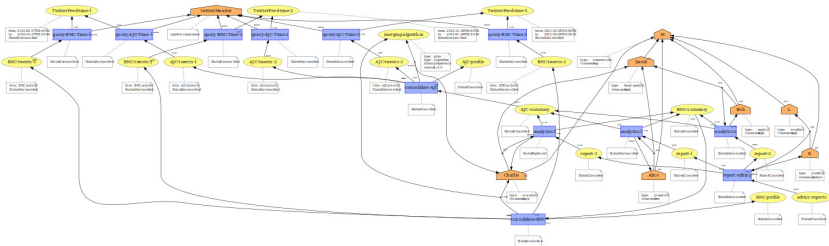
Digital Provenance: a history of processes and other pieces of data that have influenced a certain file or artefact.

Anna is creating charts for her honours thesis.



Research is split into the following fields:

- ▶ Inception papers
- ▶ Acquisition
- ▶ Storage
- ▶ Security
- ▶ Display



Provenance graphs can have thousands or millions of nodes.

Three main technical and conceptual hurdles:

- ▶ Zooming and clustering
- ▶ Ease of Use
- ▶ Security Obfuscation

A framework that allows easy exploration and examination of provenance graphs.

- ▶ **Overview:** Gain an overview of the entire graph.
- ▶ **Zoom/Details on Demand:** Zoom in on nodes and clusters to view relevant information about them.
- ▶ **Peripheral:** An understanding of the users current view in relation to the entire graph.
- ▶ **Filter:** Search or filter content
- ▶ **History:** Be able to view steps taken to current view. Undo previous steps.

- ▶ **Points of Interest:** mark points of interest for further exploration.
- ▶ **General Annotation:** take notes on nodes or clusters of interest.
- ▶ **Exporting and sharing:** export graphs or subgraphs in multiple formats.

- ▶ **Access control:** A view for administrators to be able to view who has access to different parts of a graph.
- ▶ **Partial graphs:** Support for partially obscured graphs.
- ▶ **Security feedback:** Feed back on misleading or hidden information.



