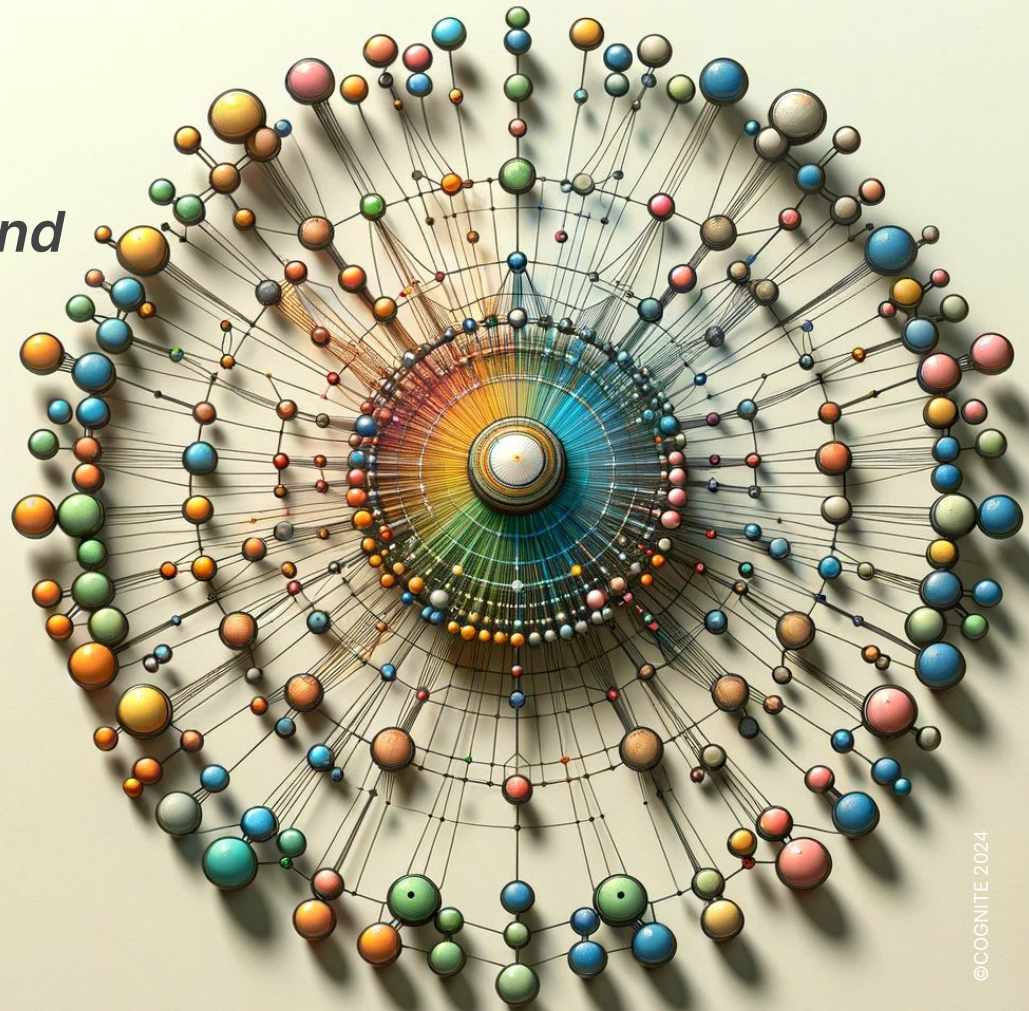


Democratizing data modeling and knowledge graph creation

IEEE, Cloud4PowerGrid WG
2024/04/12

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Disclaimer

“The opinions and viewpoints expressed in this presentation are solely those of the presenter and do not necessarily reflect the opinions or viewpoints of Cognite.”

Three persona story



Solution Architects



Domain Expert



Information Architect



But what if we can combine aspects of all three of them?



But what if we can combine aspects of all three of them?



NEAT* (ThisIsNeat.IO)

*NEAT is an **open source**, **SME-centric** and **developer-friendly** solution for rapid:*

- ***Semantic Data Modeling***
- ***Knowledge Graph Creation, Transformation and Ingestion***
to downstream platforms such as Cognite Data Fusion (CDF)
- ***Authors: Nikola Vasiljevic, Aleksandrs Livincovs, Anders Albert***



NEAT

NEAT supports two main flows:

- ***Data Modeling Flow***
- ***Graph Extract-Transform-Load Flow***

**Requires data model and graph governance*



Unify knowledge artifacts using



standards



**Data Model
(Rules)**

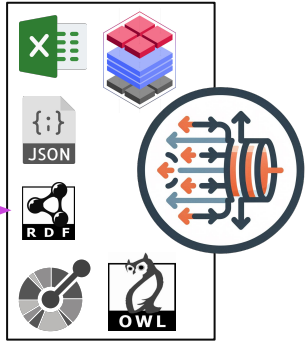


Knowledge Graph

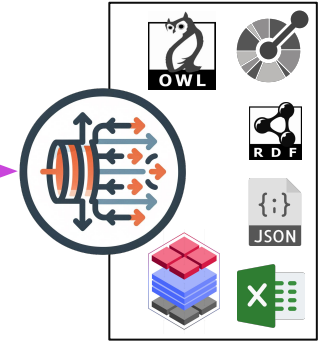
NEAT: Data Modeling Flow



IMPORTER



EXPORTER



Rules



Let's revisit roles in data modeling



Domain Expert

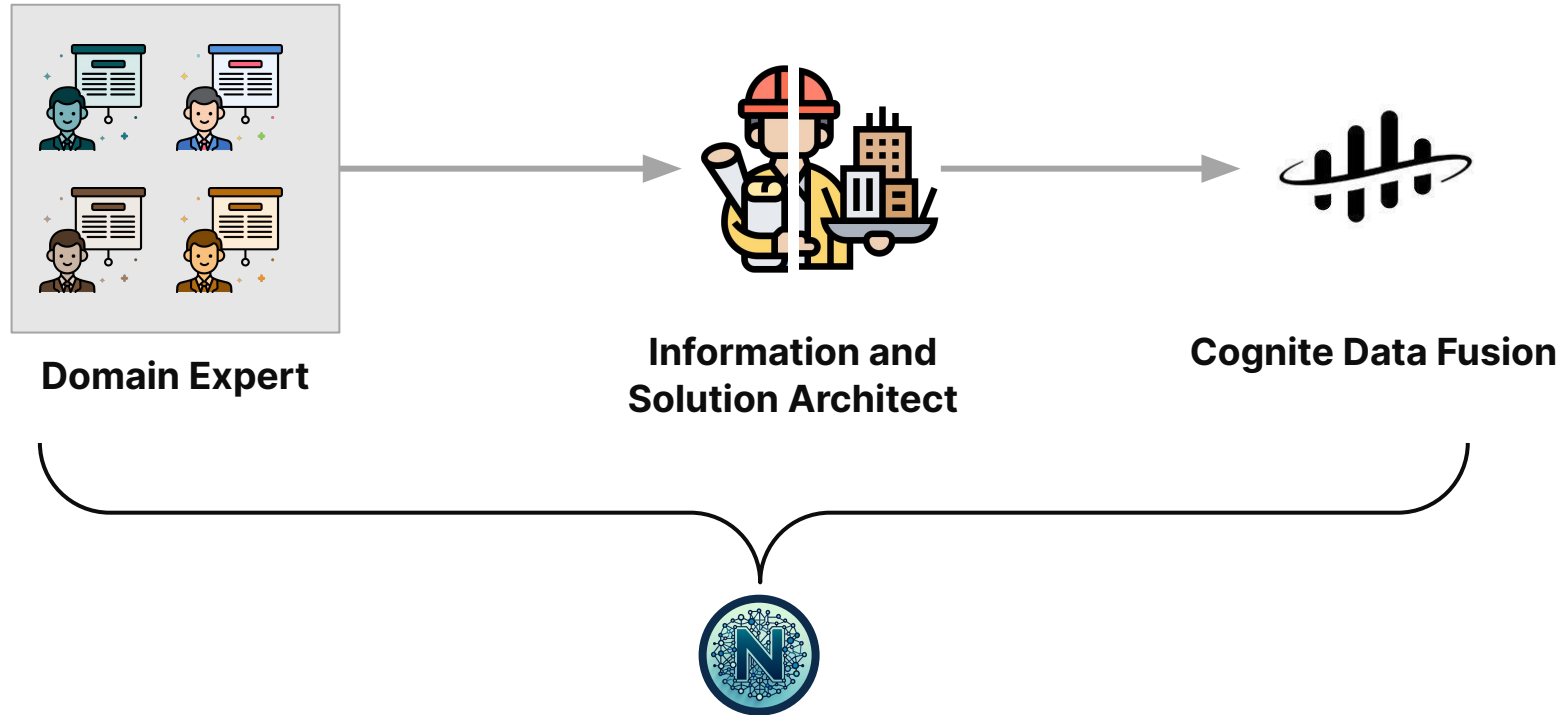


Information Architect

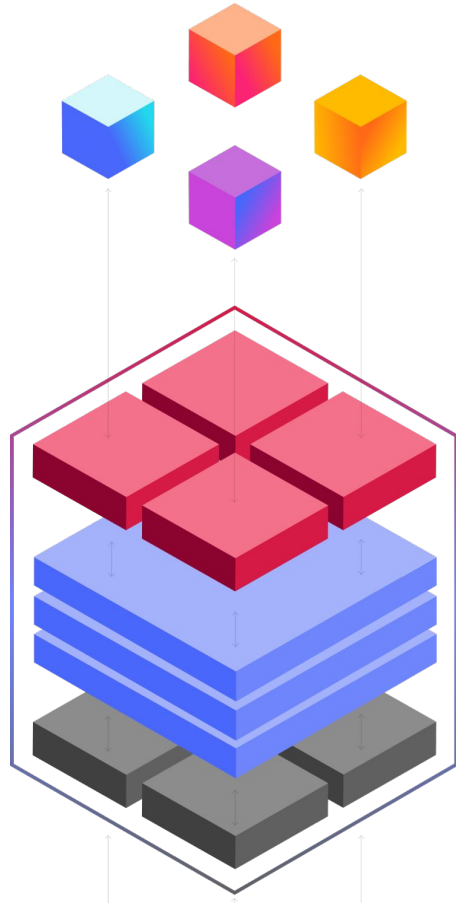


Solution Architect

Data modelling lifecycle through expert elicitation



Building Enterprise Data Model



Solution/App Data Model (DataScienceX + App Y + ...)

Enterprise Data Model (CIM + BIM + ...)

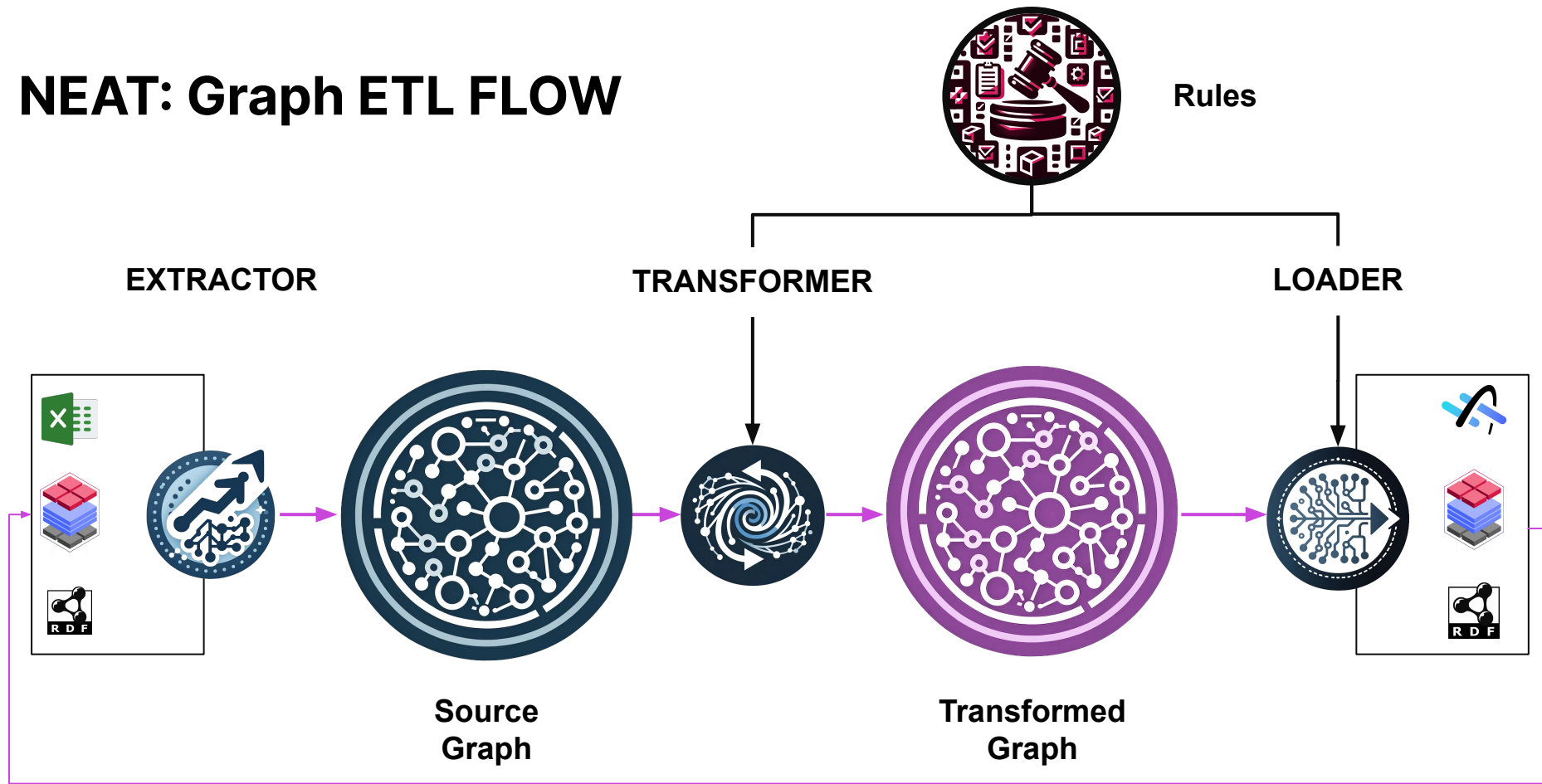
Source Data Models (CIM SCADA + ...)

Check out tutorial on how to build Enterprise Data Model at [ThisIsNeat.io](https://thisisneat.io)

Modeling using spreadsheets fosters inclusivity

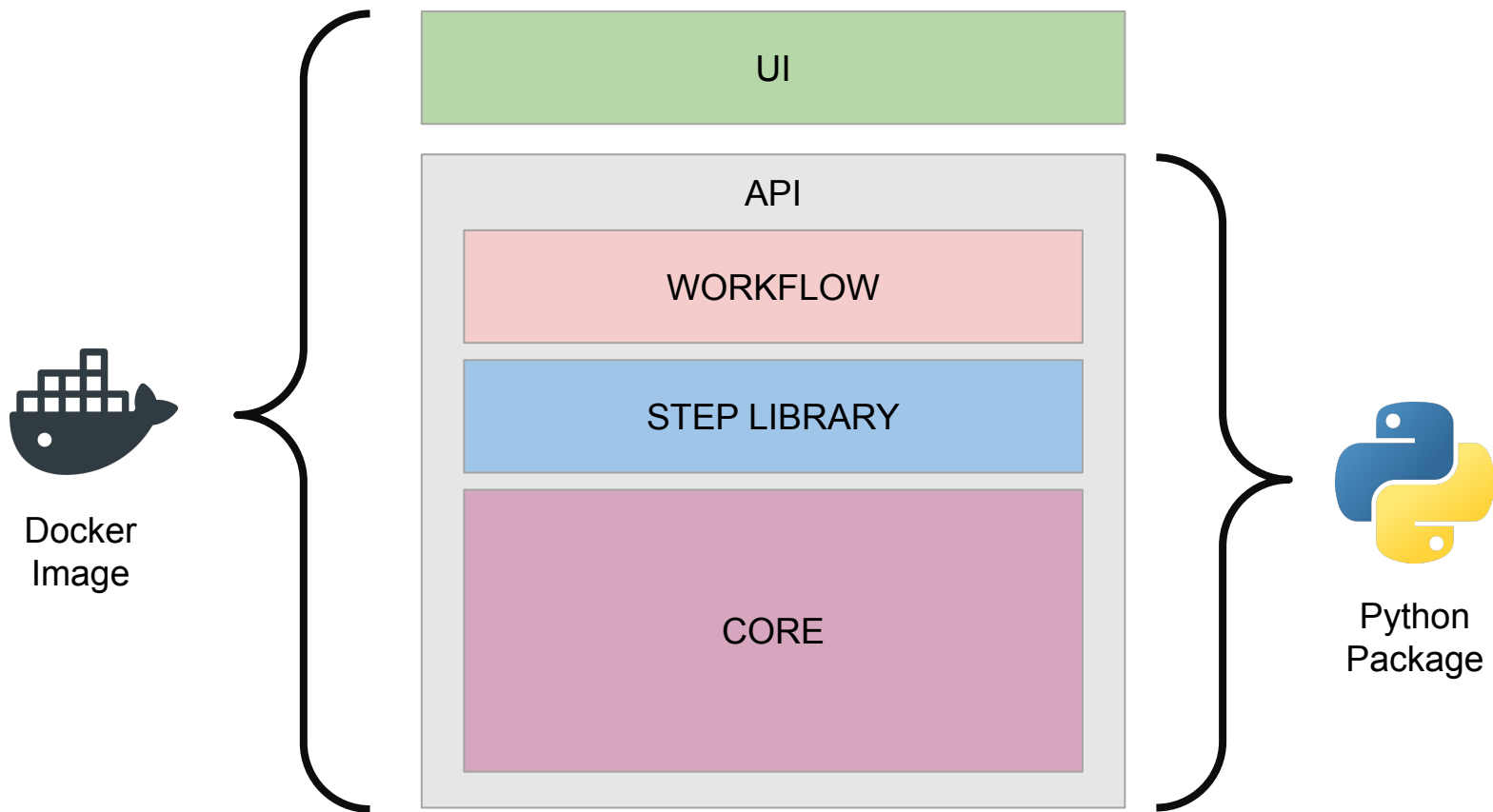


NEAT: Graph ETL FLOW





High level architecture



NEAT through UI



NEAT for developers



Future work

Version 1.0 by July 1st 2024