

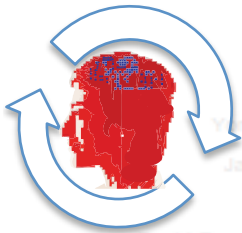


# A new kind of discovery.

## Interactive Machine Learning

Diffeo's mission is to help people organize the world's information by accelerating surprises. Interactive machine learning helps intelligence analysts rapidly traverse and develop knowledge graphs. The fluid interaction between humans and machines enables users to quickly uncover relationships between people, activities, and events in massive streams of unstructured data from across the open & dark Web and private repositories.

Diffeo grew out of research in NIST's Text Retrieval Conference (TREC) and DARPA Memex. While working on cross-document entity resolution, Diffeo's team of machine learning researchers developed a new approach to applying machine learning to knowledge discovery: instead of asking humans to train machines, Diffeo enables machines to observe users performing regular tasks, such as writing reports and gathering notes. By recommending content to fill-in knowledge gaps, Diffeo learns actively as a machine-in-the-loop. This inversion of the traditional machine learning approach solves entity resolution, a cornerstone problem in artificial intelligence. Diffeo is now applying this insight to enable people and machines to explore all aspects of knowledge graphs that were previously obscured in unstructured data.



The solution builds on large-scale hierarchical clustering, which efficiently discovers coreferent entity mentions across large collections of multi-lingual natural language documents. To exceed the inherent limitations of distance supervision, Diffeo's unique active learning technologies pivot off of user actions and leap ahead of users to discovery and rank missing relationships and activities.

Active ranking suggest unknown unknowns to fill in knowledge gaps as you explore your data. By taking note of interesting relationships, you guide the machine-in-the-loop.

Diffeo's graph analytics and evolving suite of visualizations builds on this breakthrough platform. The toolsuite's currently shipping and roadmapped capabilities include:

- Dossier building in Semantic MediaWiki (shipping now)
- Map & Time filtering of relations within the graph neighborhood of an entity (in beta now)
- Graph visualizations of neighborhood clusters (in alpha now)
- Browse anywhere integration with Chrome, Firefox, and TorBrowser (in alpha now)
- Cyber Threat Intelligence data from Dark and Open Web sites (in alpha now)
- Enhanced cross-language discovery features (in development)
- Relation-type recommendations for faster traversals (in development)

The Diffeo platform includes web services and Javascript client libraries for easy integration with portals and other tools. A fully featured integration with the built-in Semantic MediaWiki provides a turnkey system that an admin can install on a CentOS6/RHEL6 system in a few minutes.

Diffeo ships with English, Arabic, Chinese, Russian, and Spanish named entity recognition from Basis Technology. More than 30 other languages are available as add-on packs. Diffeo also consumes data from OpenSextant, MetaCarta, and any third-party named entity recognizers.

To learn more about Diffeo's unique approach, contact [sales@diffeo.com](mailto:sales@diffeo.com).