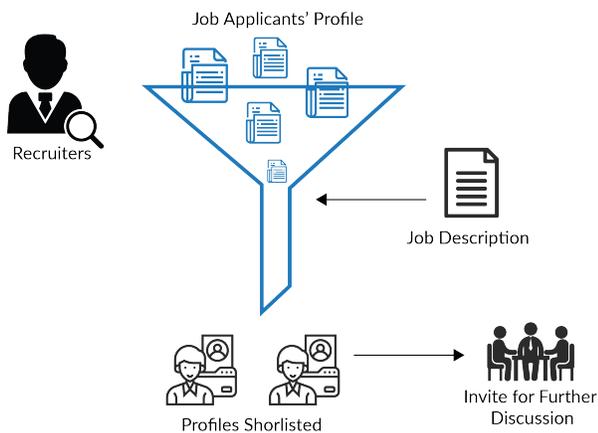


# How to unlock the 360° view of job applicants' profiles through an ontology-based platform

—Anshul Ujlayan, Consultant, Data Science, Mastech InfoTrellis

Recruitment is a key activity in any organization. Hiring the right candidate with the required skillsets is a daunting task and it needs a detailed information analysis. An automated 360-degree view of candidates profiles can help organizations find skilled resources with less effort in less time. Recruitment is not a straight-forward task for any organization without proper analysis of candidates' profiles. Inclusion of external data from social and professional networks can help improve the candidates' screening process. The common recruitment process followed by many organizations is defined below:

## Profile shortlisting Based on Keywords in Job Description



In this traditional approach, recruiters match the job applicants' profiles based on specific keywords or attributes in the job description and shortlist these for further discussion. This approach produces a vast bank of profiles with misleading information that does not consider the candidates' external data. The external data related to candidates' profiles brings many insights into the candidates' experience, performance, networks, and negative news of their careers.

## What is 360° view of job applicants profile?

A 360-degree view of candidates' profiles is a complete perspective of the candidates gathered from internal or external data sources based on artificial intelligence.

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The candidates' overall outlook helps recruiters review all insights faster for a specific open position. The candidate job matching dashboard helps in getting real-time recommendations to fill the urgent job requirements. It also enables the organization to meet its business goals and growth.

Building a 360-degree view of candidates' e-dossier requires a lot of external information to be processed and integrated along with internal and external data. For example, to hire a chief finance officer, the recruiter in any organization reviews the potential candidate's information such as academic background, professional experience, budget, professional network, and negative news about the candidate's previous job. All such information helps the recruiter to recommend the best match profile for further discussion to the management in less time.

## How does ontology help in recruitment?

Enterprises are working to enhance the available generic human resource ontology provided by the research community with their own recruitment process experience. This enhancement will result in rapid information extraction to provide instant insights on recruitment. The transition from the traditional approach to augmented intelligence would optimize the generation of a 360-degree view of candidates' profiles. Machine learning and ontology-based engines will learn statistical rules that consider a larger number of data points in a candidate's profiles compared

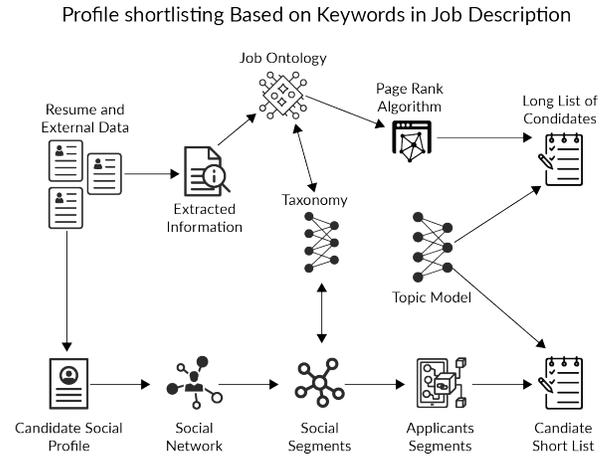
to the various parameters that recruiters typically consider. The ontology-based HR computing engine can simultaneously compare thousands of candidates, rather than limiting to the first few candidates that pass the screening. Such an approach doesn't only work with structured categorical data but also uses text mining algorithms to analyse unstructured text from resumes based on a knowledge graph.

The Ontology-based recruitment model defines principles that clarify the features of the application and distinguishes the relationship between individual elements linked to a domain ontology. Such a model consists of two distinct ontologies related to job requirement and general human resource characteristics:

- Generic HR ontology for job applicants: It specifies general characteristics of job applicants.
- Job Description and Offer ontology: It describes functionality linked to the domain of job offers represented by a domain ontology.

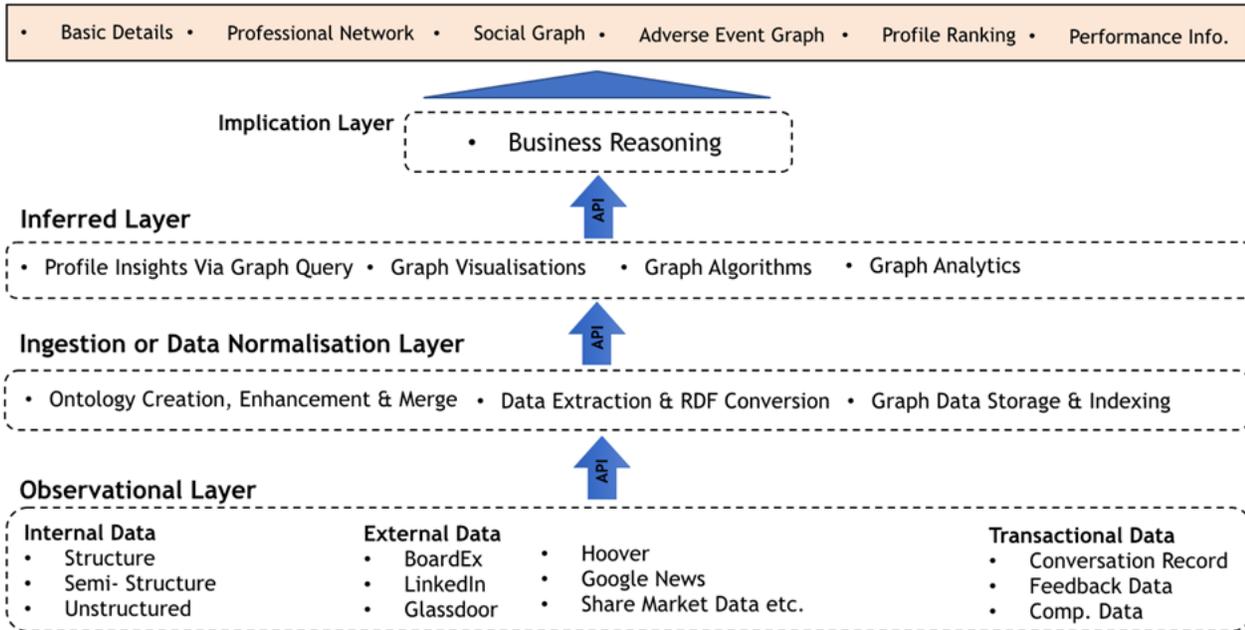
The platform below shows the illustrative process for ontology and machine learning-based solutions

for enterprises to generate short and long lists of recommended candidates.



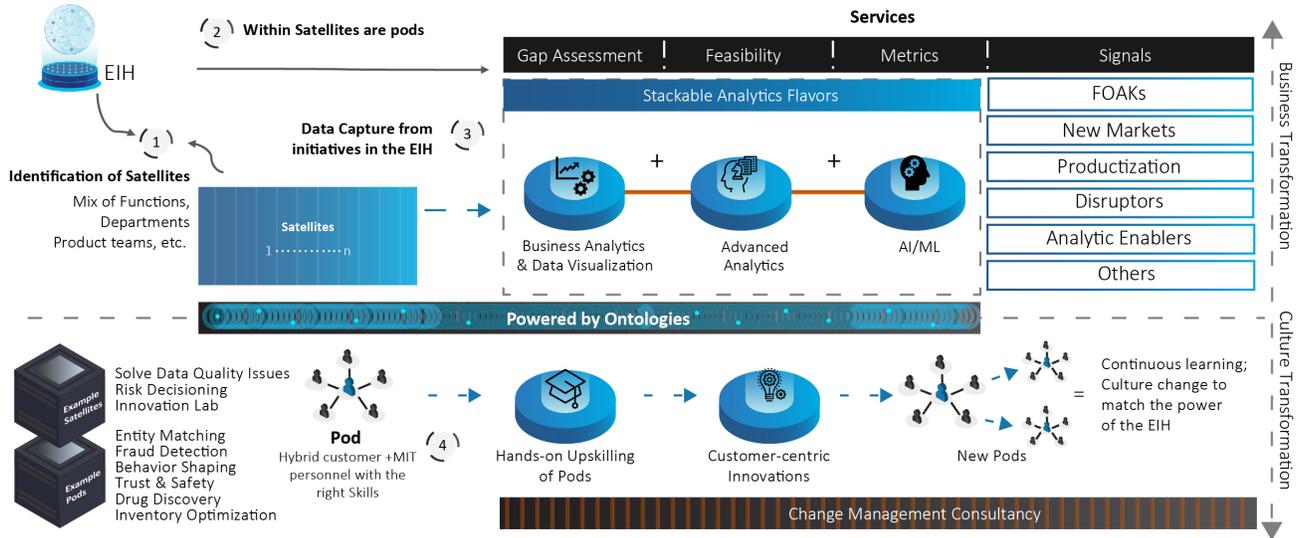
At Mastech Infotrellis, we work to utilize the entire corpus of enterprise data along with the external data source to leverage it with state-of-the-art techniques from decision & data science to accelerate enterprise learning for recruitment. We would love to talk with you about our ontology-based HR compute engine.

**User Interface- Recommended Candidates View**



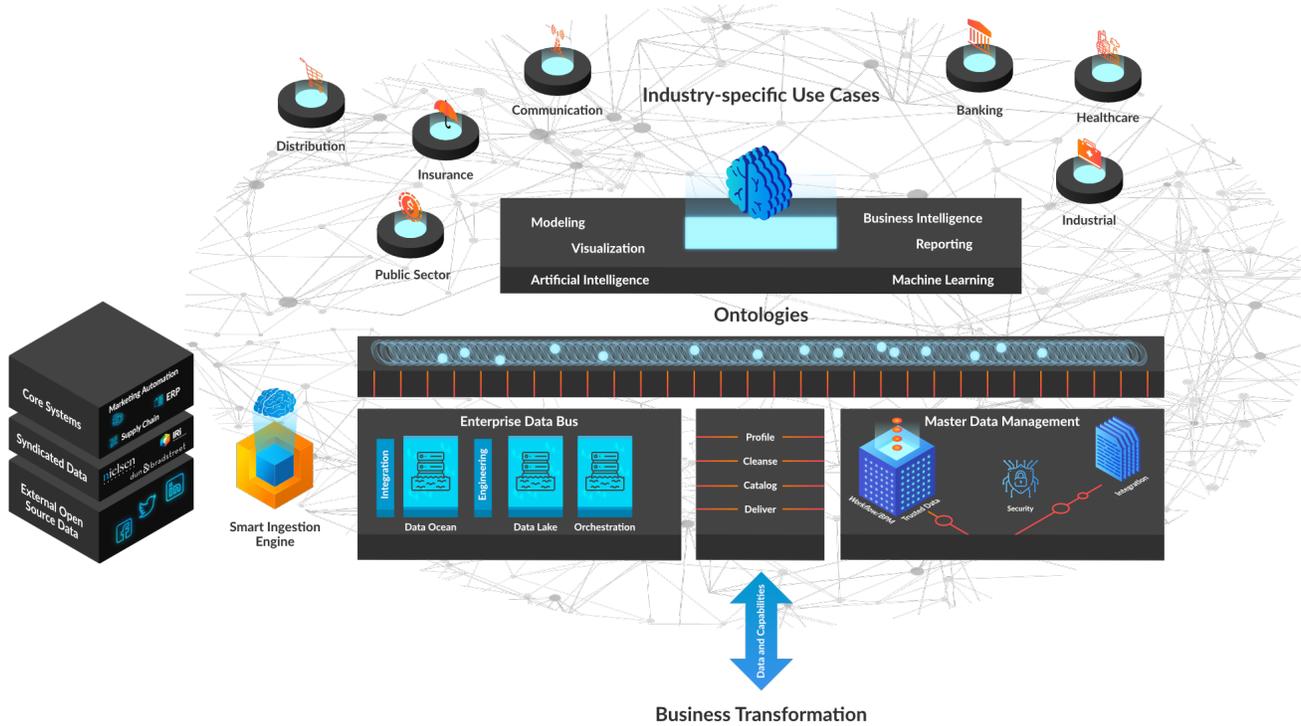
## Mastech InfoTrellis Data Science Practice and Analytics Center of Excellence

Our team of data scientists hails academically and professionally from diverse backgrounds, allowing them to derive best practices across domains and design the Analytics Center of Excellence (ACE) that best fits specific client requirements.



## We Architect Enterprise Intelligence

At Mastech InfoTrellis we work to expose the entire corpus of enterprise data and leverage it with state of the art techniques from Decision & Data Science to accelerate enterprise learning. We would love to talk with you about it.



## Author

Anshul brings 14+ years of experience as a Statistician and Data scientist for analytics-driven Centers of Excellence (CoE) for clients aiming to be strategic and culture-conscious in their digital transformation. He holds a BS and MS in Applied Statistics and submitted his research in Artificial Intelligence and Machine Learning. He has multiple certifications on AWS, IBM Cloud Pak 4 Data, Neo4j graph DB, NLP/NLG platforms, and Advanced Scientific Programming from IIT Bombay. His passion is building great AI products that solve business problems. Throughout his career, he helped engineers with several AI-based data and analytics products. His experience spans from Ontologies/Reasoning/Inference to Graph-DB, Large-Scale Graph Queries, NLP/NLG, Time Series Analysis, and Data Mining with practical expertise in rapid + lean product development. He has managed many data science teams that have delivered solutions to clients in a timely, efficient manner for different domains, namely, Human capital, Banking, Insurance, Pharma, etc.

## About

Mastech InfoTrellis partners with enterprises to help them achieve their business objectives by leveraging the power of data to derive deep, analytical insights about their business and its operations. We accelerate business velocity, minimize costs, and drastically improve corporate resiliency through personalized, process-oriented programs, consisting of strategy, data management (including master data management), business intelligence and reporting, data engineering, predictive analytics, and advanced analytics. Part of the NYSE-listed, \$193.6M, digital transformation IT services company, Mastech Digital; we drive businesses forward around the world, with offices spread across the US, Canada, India, Singapore, UK, and Ireland.