

Discovering and Interacting with Knowledge Graphs for Job Postings



OSDS

OpenLink Structured Data Sniffer

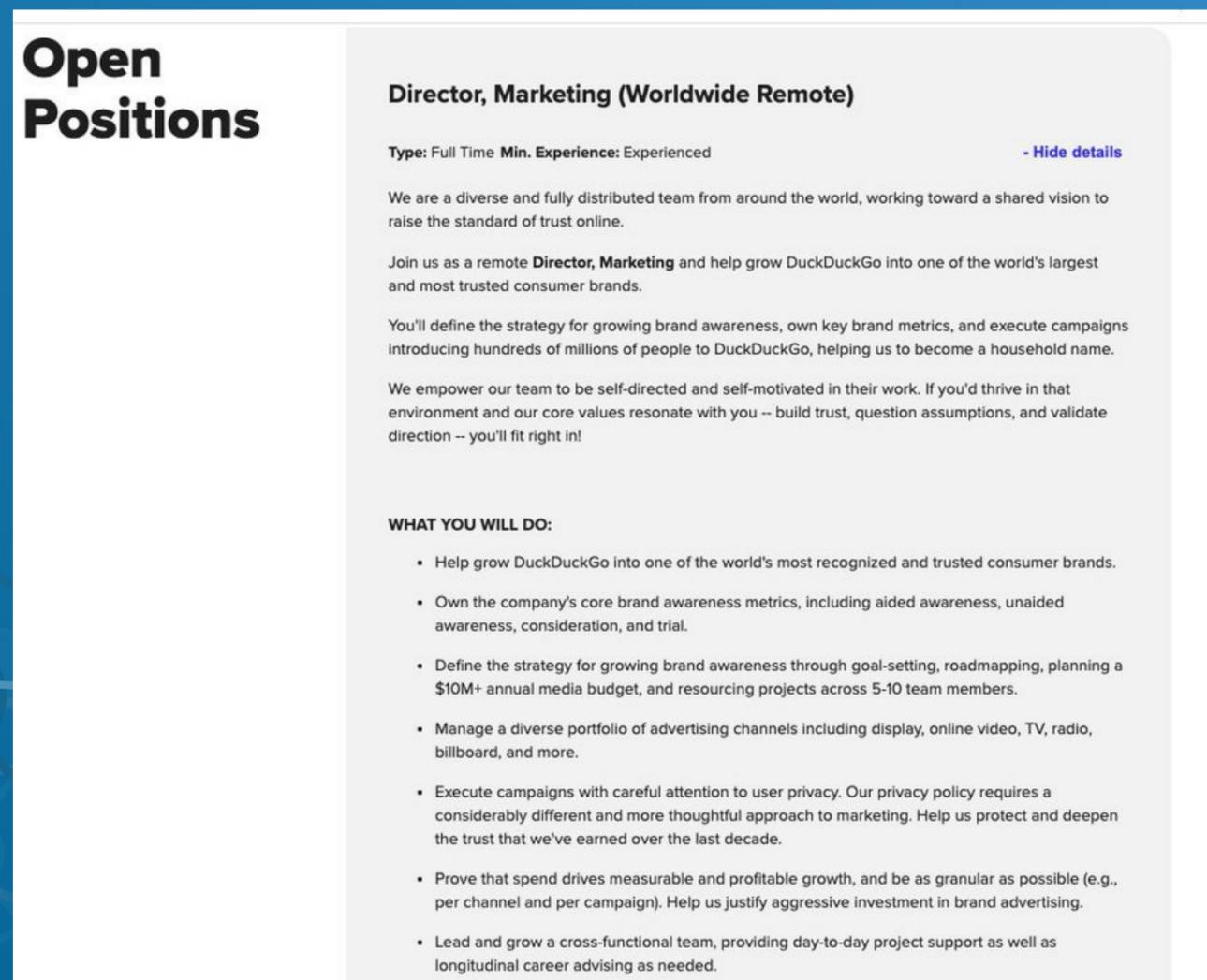
Job Postings are increasingly published using Web Pages comprising Knowledge Graphs. This new HR technique increases the Serendipitous Discovery Quotient (SDQ) of Job Postings within, and across, enterprises.

The slides that follow demonstrate how the OpenLink Structured Data Sniffer (OSDS) Browser Extension provides a powerful, No-Code, solution for easy discovery of Job Posting Knowledge Graphs published via HTML-based Structured Data Islands.



OSDS demo visiting a job posting page on DuckDuckGo

The image on the right shows that DuckDuckGo has made good use of RDF embedded in HTML5 (via RDFa) in its Job Posting pages.



Open Positions

Director, Marketing (Worldwide Remote)

Type: Full Time Min. Experience: Experienced [- Hide details](#)

We are a diverse and fully distributed team from around the world, working toward a shared vision to raise the standard of trust online.

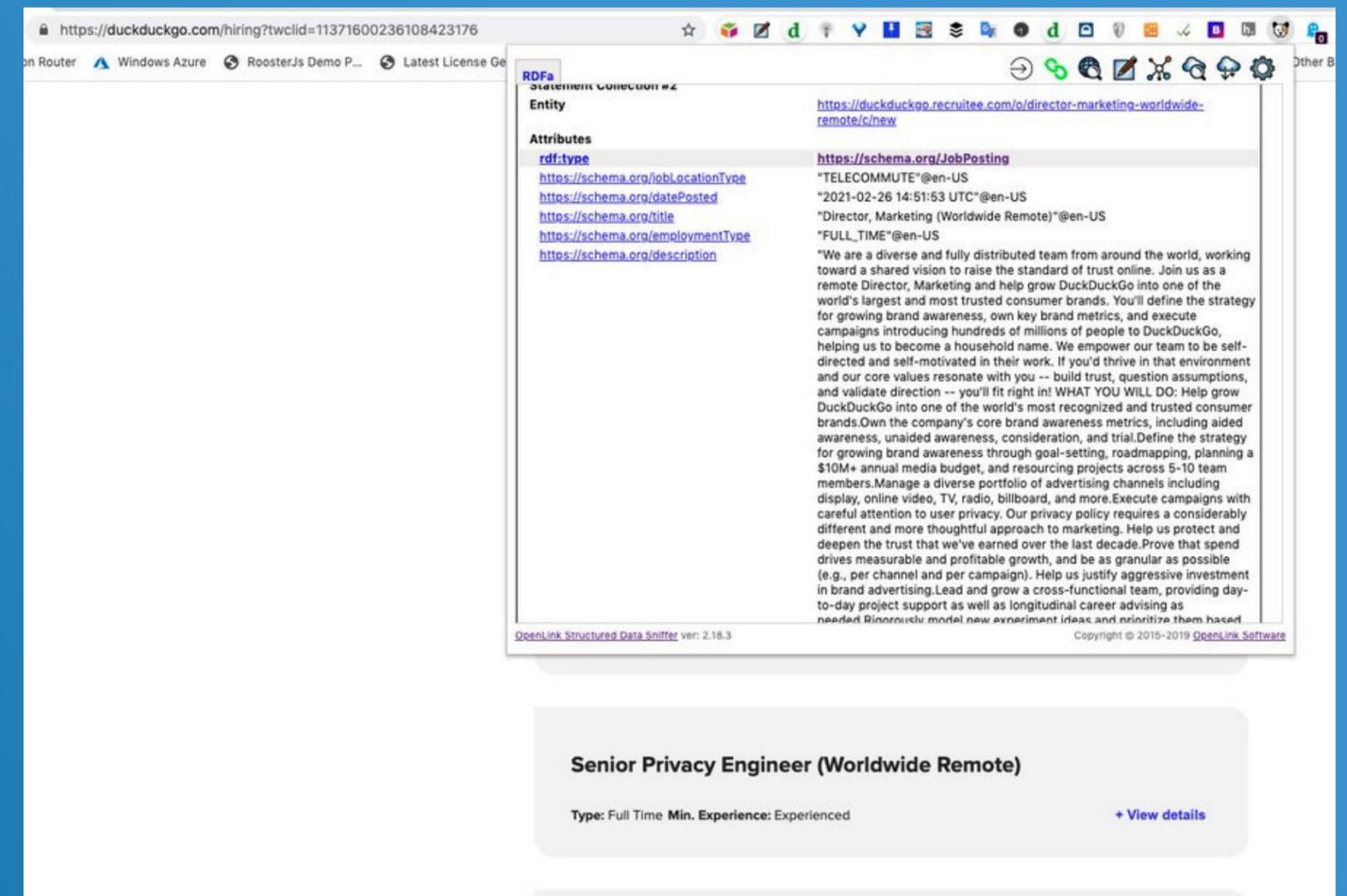
Join us as a remote **Director, Marketing** and help grow DuckDuckGo into one of the world's largest and most trusted consumer brands.

You'll define the strategy for growing brand awareness, own key brand metrics, and execute campaigns introducing hundreds of millions of people to DuckDuckGo, helping us to become a household name.

We empower our team to be self-directed and self-motivated in their work. If you'd thrive in that environment and our core values resonate with you -- build trust, question assumptions, and validate direction -- you'll fit right in!

WHAT YOU WILL DO:

- Help grow DuckDuckGo into one of the world's most recognized and trusted consumer brands.
- Own the company's core brand awareness metrics, including aided awareness, unaided awareness, consideration, and trial.
- Define the strategy for growing brand awareness through goal-setting, roadmapping, planning a \$10M+ annual media budget, and resourcing projects across 5-10 team members.
- Manage a diverse portfolio of advertising channels including display, online video, TV, radio, billboard, and more.
- Execute campaigns with careful attention to user privacy. Our privacy policy requires a considerably different and more thoughtful approach to marketing. Help us protect and deepen the trust that we've earned over the last decade.
- Prove that spend drives measurable and profitable growth, and be as granular as possible (e.g., per channel and per campaign). Help us justify aggressive investment in brand advertising.
- Lead and grow a cross-functional team, providing day-to-day project support as well as longitudinal career advising as needed.



https://duckduckgo.com/hiring?twclid=11371600236108423176

OpenLink Structured Data Sniffer ver: 2.18.3

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RDFa	
Statement Collection #2	
Entity	https://duckduckgo.recruitee.com/o/director-marketing-worldwide-remote/c/new
Attributes	
rdf:type	https://schema.org/JobPosting
https://schema.org/jobLocationType	"TELECOMMUTE"@en-US
https://schema.org/datePosted	"2021-02-26 14:51:53 UTC"@en-US
https://schema.org/title	"Director, Marketing (Worldwide Remote)"@en-US
https://schema.org/employmentType	"FULL_TIME"@en-US
https://schema.org/description	"We are a diverse and fully distributed team from around the world, working toward a shared vision to raise the standard of trust online. Join us as a remote Director, Marketing and help grow DuckDuckGo into one of the world's largest and most trusted consumer brands. You'll define the strategy for growing brand awareness, own key brand metrics, and execute campaigns introducing hundreds of millions of people to DuckDuckGo, helping us to become a household name. We empower our team to be self-directed and self-motivated in their work. If you'd thrive in that environment and our core values resonate with you -- build trust, question assumptions, and validate direction -- you'll fit right in! WHAT YOU WILL DO: Help grow DuckDuckGo into one of the world's most recognized and trusted consumer brands. Own the company's core brand awareness metrics, including aided awareness, unaided awareness, consideration, and trial. Define the strategy for growing brand awareness through goal-setting, roadmapping, planning a \$10M+ annual media budget, and resourcing projects across 5-10 team members. Manage a diverse portfolio of advertising channels including display, online video, TV, radio, billboard, and more. Execute campaigns with careful attention to user privacy. Our privacy policy requires a considerably different and more thoughtful approach to marketing. Help us protect and deepen the trust that we've earned over the last decade. Prove that spend drives measurable and profitable growth, and be as granular as possible (e.g., per channel and per campaign). Help us justify aggressive investment in brand advertising. Lead and grow a cross-functional team, providing day-to-day project support as well as longitudinal career advising as needed. Rinne's model new experiment ideas and minimize them based

Senior Privacy Engineer (Worldwide Remote)

Type: Full Time Min. Experience: Experienced [+ View details](#)



OSDS demo visiting a job posting page on LinkedIn

The image on the right shows that LinkedIn is also leveraging RDF (using Schema.Org terms) in its Job Posting pages.

The screenshot shows a LinkedIn job posting for 'Director, Data Solutions Architect' at Fidelity Investments in Durham, NC. The page includes a company logo, job title, location, and application buttons. A 'People also viewed' sidebar lists related roles like 'Cyber Solutions Architect' at TekSynap and 'Solution Architect - Experience Management' at Deloitte. The job description is partially visible, starting with 'Director, Data solutions Architect'.

This screenshot shows the same LinkedIn job posting page as the left image, but with an RDF/JSON-LD overlay. The overlay displays the structured data for the job posting, including the entity type 'schema:JobPosting', the date posted, and the job description. The job description text is rendered in a code-like font, showing HTML tags and Schema.org terms like 'schema:datePosted' and 'schema:description'. The overlay also includes a 'Statement Collection #1' header and a 'JSON-LD' tab.



LinkedIn Job Posting Example

A single mouse-click generates a SPARQL query from the Job Posting page.

The screenshot shows a web browser window with a SPARQL query editor on the left and a job posting page on the right. The query is as follows:

```
1 DEFINE get:soft "soft"  
2 SELECT (SAMPLE(?s) AS ?EntityID)  
3         (COUNT(*) AS ?count)  
4         (?o AS ?EntityTypeID)  
5 FROM <https://www.linkedin.cn/jobs/view/director-data-solutions-architect-at-fidelity-investments-2220915892#pagejsonld#DataSource>  
6 WHERE {  
7   ?s a ?o .  
8   FILTER (CONTAINS(STR(?o), 'schema'))  
9 }  
10 GROUP BY ?o  
11 ORDER BY DESC (?count)  
12 LIMIT 50  
13
```

The job posting page displays the following information:

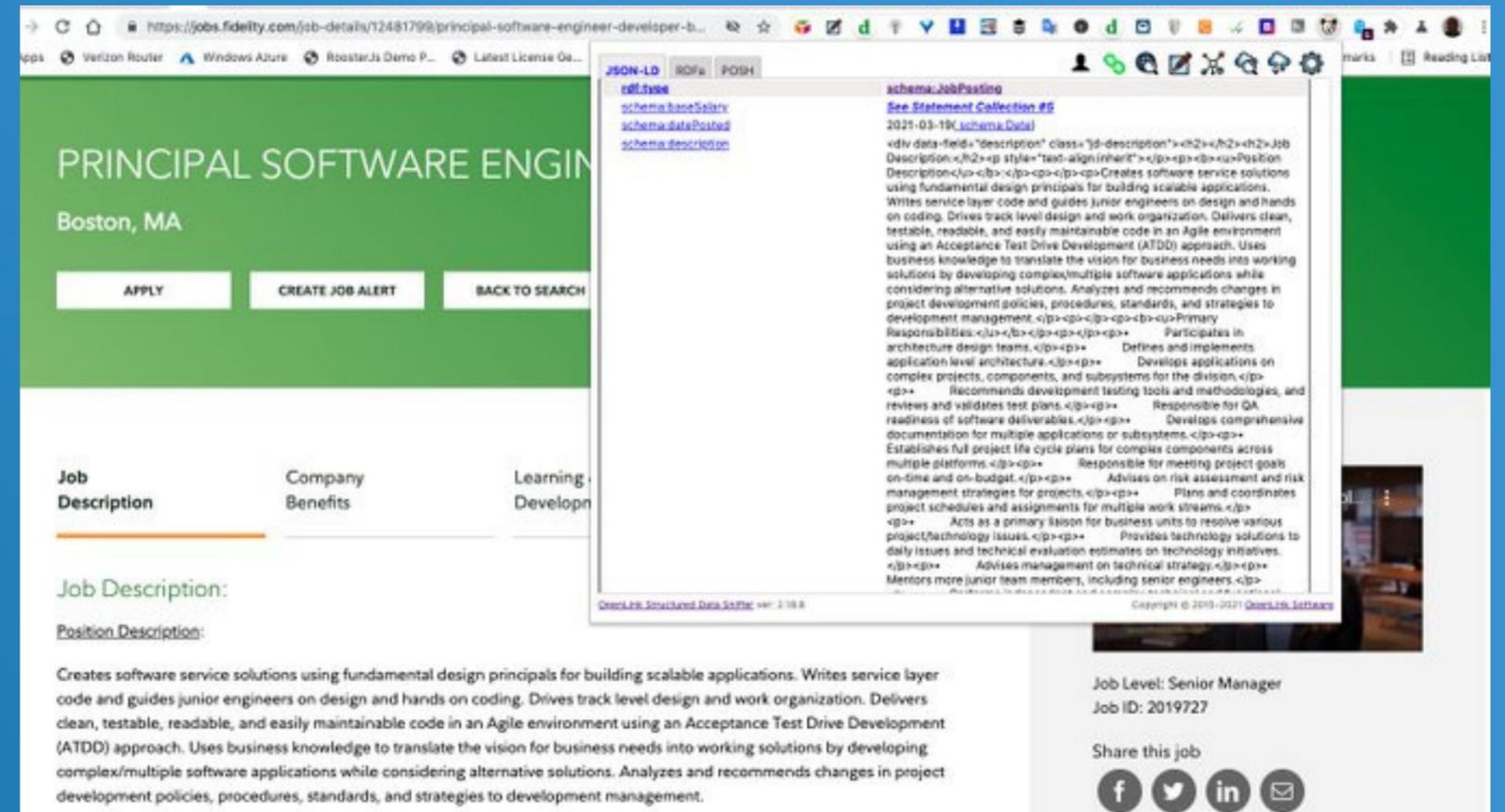
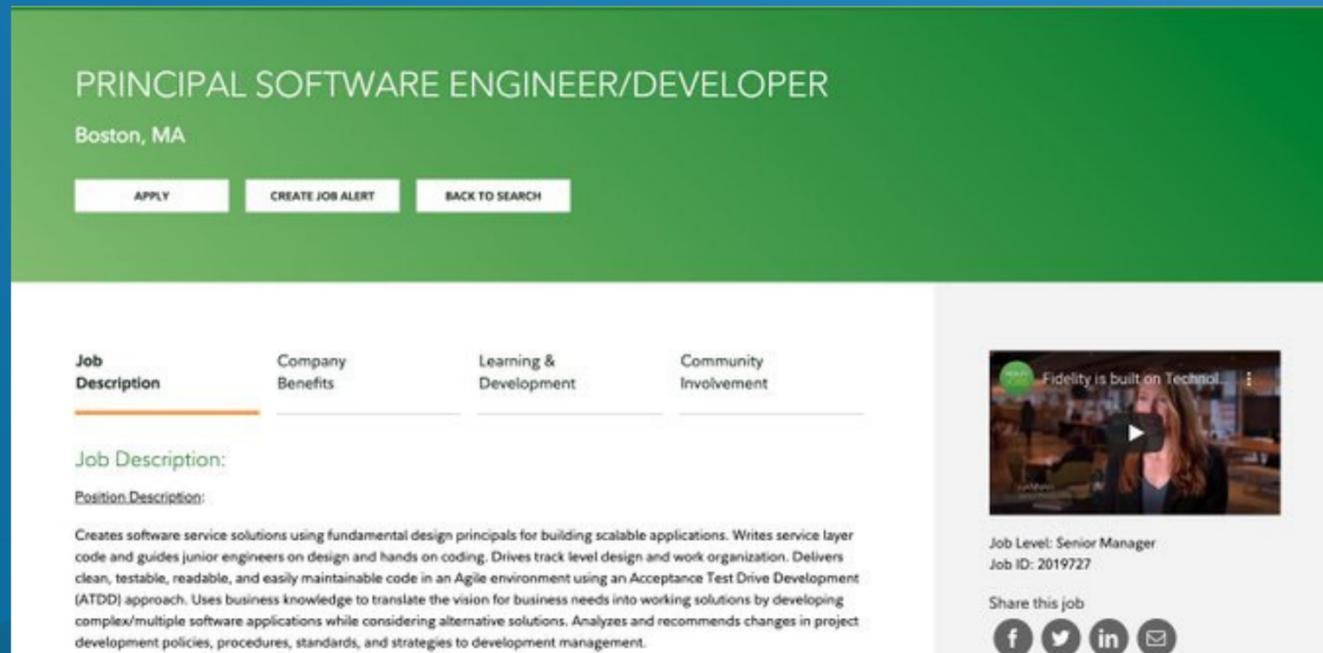
About: <https://linkeddata.uriburner.com/about/id/entity/https://www.linkedin.cn/jobs/view/director-data-solutions-architect-at-fidelity-investments-2220915892#pagejsonld> [Go to Source](#) [Metadata](#) [Permalink](#)
An Entity of Type: `schema:JobPosting`, within Data Space: `linkeddata.uriburner.com` associated with source: `document(s)`
Type: `JobPosting` [New Facet based on Instances of this Class](#)

Attributes	Values
Type	<code>JobPosting</code>
description	Job Description Director, Data solutions Architect <p>At Fidelity, we love to use data and analytics to personalize incredible customer experiences and develop solutions that help our customers live the lives they want. As part of our digital transformation, we have significant investments in innovative big data capabilities to support our customer obsessed culture and growing data science practice. We are looking for a hands-on data solutions architect leader that can help us build our next generation, cloud enabled data ecosystem.</p> <p>This position will be based in Durham, NC.</p> The Expertise we're looking for <ul style="list-style-type: none">• Bachelor's or Master's Degree in a technology related field (e.g. Engineering, Computer Science, etc.) required.• Demonstrated technology and personal leadership experience in architecting, designing and building highly scalable Bigdata applications.• Enterprise scale expertise in data management best practices such as data integration, data security, data warehousing, data analytics, metadata management and data quality.• Extensive knowledge and experience in architecting modern data integration frameworks, highly scalable distributed systems using open source and emerging data architecture designs/patterns.• Experience building external cloud (e.g. AWS) data applications and capabilities is highly desirable.• Expert ability to evaluate, prototype and recommend open source and vendor technologies and platforms.• Proven experience in relational, NoSQL, Microservices, ELT technologies and in-memory databases.• Experience with DevOps, Continuous Integration and Continuous Delivery technologies is desirable.• This role requires 10+ years of data solution architecture, design and development/delivery experience.• Solid experience in Agile methodologies (Kanban and SCRUM) The Purpose of your role Director, Data Solutions Architect in FI Customer Data Technologies will drive a holistic information management strategy across OLAP and OLTP platforms, develop reference architecture and roadmaps to build highly available, scalable and distributed data platforms using open source frameworks to process high volume, high velocity and wide variety of structured and unstructured data. This role is also responsible for driving innovation, prototyping and recommending solutions in Big data and analytics space. Additionally, collaborate with key partners in the adoption of emerging technologies. The Skills You Bring <ul style="list-style-type: none">• Leadership skills to architect and design critical customer facing data capabilities.• Ability to collaborate and partner with business domain leads, data scientists, product owners, enterprise architects and other functional leads to deliver world class data solutions.• Expertise in open source streaming products, Microservices, Message Oriented Middleware, Stream processing, Master Data Management, Data Lake, Deep Analytic technologies, BI Reporting and Analytics.• Strong experience in Object Oriented Programming (Java, Scala, Python) and Spark.• Mastery of relational database, NoSQL, ETL/ELT and data integration technologies.



Fidelity Job Posting Example (1)

The image on the right shows Fidelity is leveraging RDF embedded in HTML documents to expose their Job Posting Knowledge Graph.



Fidelity Job Posting Example (2)

You can create a [SPARQL query against the Job Posting page.](#)

The screenshot displays a SPARQL query interface. On the left, a list of EntityIDs is shown, including URLs like <https://www.w3.org/2002/07/owl#> and <https://jobs.fidelity.com/job-details/12481799/principal-software-engineer-developer-bos>. The central pane contains the following SPARQL query:

```
1 DEFINE get:soft "soft"
2 SELECT (SAMPLE(?s) AS ?EntityID)
3        (COUNT(*) AS ?count)
4        (?o AS ?EntityTypeID)
5 FROM <https://jobs.fidelity.com/job-details/12481799/principal-software-engineer-developer-bos>
6 WHERE {
7   ?s a ?o .
8   FILTER (CONTAINS(STR(?o), 'schema'))
9 }
10 GROUP BY ?o
11 ORDER BY DESC (?count)
12 LIMIT 50
13
```

On the right, the results for the query are displayed. The top result is for the job posting: "About: Principal Software Engineer/Developer". The interface shows the job title, a description, and a list of primary responsibilities.

Attributes

Attributes	Values
Type	JobPosting

Job Description:

Position Description:

Creates software service solutions using fundamental design principals for building scalable applications. Writes service layer code and guides junior engineers on design and hands on coding. Drives track level design and work organization. Delivers clean, testable, readable, and easily maintainable code in an Agile environment using an Acceptance Test Drive Development (ATDD) approach. Uses business knowledge to translate the vision for business needs into working solutions by developing complex/multiple software applications while considering alternative solutions. Analyzes and recommends changes in project development policies, procedures, standards, and strategies to development management.

Primary Responsibilities:

- Participates in architecture design teams.
- Defines and implements application level architecture.
- Develops applications on complex projects, components, and subsystems for the division.
- Recommends development testing tools and methodologies, and reviews and validates test plans.
- Responsible for QA readiness of software deliverables.
- Develops comprehensive documentation for multiple applications or subsystems.
- Establishes full project life cycle plans for complex components across multiple platforms.
- Responsible for meeting project goals on-time and on-budget.
- Advises on risk assessment and risk management strategies for projects.
- Plans and coordinates project schedules and assignments for multiple work streams.
- Acts as a primary liaison for business units to resolve various project/technology issues.
- Provides technology solutions to daily issues and technical evaluation estimates on technology initiatives.
- Advises management on technical strategy.
- Mentors more junior team members, including senior engineers.



Conclusion

As you can see, with one click on OSDs, you have an exploratory page with links into a Knowledge Graph constructed from Hyperlinks using Linked Data principles.

Note:

These Hyperlinks are created by the Virtuoso Sponger, enabled as part of our URIBurner Service. In other words, this is just another unique feature of Virtuoso !



How Do I Get Going?

Simply install the OSDS extension in your browser and then visit a page of interest. Upon page display, the OSDS icon will be visually activated, indicating metadata discovery. Once the OSDS icon is clicked, you will be presented with a visualization of transformed metadata.

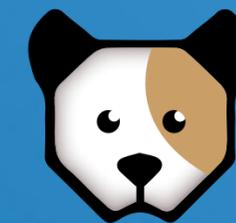
OSDS Download options:

- [Chrome Store](#)
- [Mozilla FireFox Store](#)
- [GitHub](#)
- Safari - available to download from the apple app store



ADDITIONAL INFORMATION

- [OSDS Home Page](#)
- [Virtuoso Home Page](#)
- [OpenLink Software Home Page](#)



OSDS

OpenLink Structured Data Sniffer