



Tom Soru

Neuro-Symbolic AI Specialist

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*I'm an AI enthusiast
with the dream of giving
my small contribution
to the quest for intelligence,
bridging the gap between
language models
and symbolic systems.*

EXPERIENCE

Liber AI Ltd., London, UK

FOUNDER & RESEARCHER, LIBER AI LTD > JULY 2025 – PRESENT

- Neuro-symbolic AI consultancy; R&D services for industry.
- Agentic AI for semantic modelling, knowledge extraction, entity resolution, and question answering.

LEAD RESEARCHER, LIBER AI RESEARCH > OCTOBER 2017 – PRESENT

- Ontology construction pipeline for Enterprise Knowledge Graphs. **Python, LLMs, RDF(S)**
- Team Lead of research project [Neural SPARQL Machines](#): Question Answering over Knowledge Graphs using Recurrent Neural Networks (4 publications, 200+ stars on Github). **Python, TensorFlow, SPARQL**

Ortecha Ltd., London, UK

SENIOR ASSOCIATE CONSULTANT > JULY 2025 – PRESENT

- Semantic modelling and knowledge engineering for a retail corporation. **Python, RDF(S), AWS Bedrock**
- Agentic knowledge extraction & entity resolution from enterprise data. **Python, GraphRAG, LLMs, RDF(S)**

Serendipity AI Ltd., London, UK

ARTIFICIAL INTELLIGENCE LEAD > SEPTEMBER 2021 – JULY 2025

- [Strategic Intelligence](#) platform of the World Economic Forum
 - Signal & Trend Extraction via Natural Language Understanding and Large Language Models to enrich topic briefings. **Python, Torch, Transformers, Neo4j, Docker, AWS, OpenAI GPT, RAG**
 - Research & development of Horizon, an LLM-based event forecasting system with accuracy comparable to prediction markets, [demoed at the Davos 2025 conference](#). **Python, OpenAI GPT**
- Multi-agent simulations of future scenarios via Large Language Models. **Python, OpenAI GPT**
- Design & implementation of time-series forecasting models. **Python, TensorFlow, Keras**

Scalpel Ltd., London, UK

NLP & SPEECH ENGINEER > AUGUST 2020 – SEPTEMBER 2021

- Deep learning model for distant Automatic Speech Recognition in a surgery room. **Python, Torch, fairseq**
- Design & implementation of real-time Medical Information Extraction from text. **Python, AWS, Docker**

Data Lens Ltd. and Semantic Integration Ltd., London, UK

DATA SCIENTIST & ARCHITECT > NOVEMBER 2018 – AUGUST 2020

- NLP Pipeline for scalable Information Extraction from unstructured data. **Python, Java, AWS, Docker**
- Development of a Named Entity Recognition algorithm for the Fintech domain with 90% accuracy.
- Design & implementation of a semantic reasoner for an international retail company. **Node.js, SPARQL**
- Design of a data architecture for knowledge discovery for a global firm in the FTSE 250 Index. **RDF(S)**

AKSW, University of Leipzig, Leipzig, Germany

DOCTORAL RESEARCHER > JULY 2012 – OCTOBER 2018

- PhD: "Learning Metrics for Link Discovery" under the supervision of [Prof. Dr. Axel Ngonga](#).

- R&D of two scalable methods for Link Prediction in directed graphs. **Python, Java, SPARQL, RDF(S)**
- Design and development of [ROCKER](#), algorithm for RDF Key Discovery, and its web-based GUI. **Java, MySQL, RDF(S), AWS, JS, Docker**
- Machine Learning techniques (KG embeddings, SVMs, MLP) for Entity Resolution. **Java, Keras, Weka**
- Contributions in research projects [LinkLion](#), [LIMES 1.0](#), [ML-Schema](#). **Java, JSP, OWL, SPARQL, RDF(S)**
- 30+ publications in Web conferences (WWW, ISWC, ESWC) and AI workshops (WSDM, ICML, AAAI).

BuzzTweet, Berlin, Germany

LEAD DEVELOPER > APRIL 2015 – JUNE 2017

- R&D of a real-time Sentiment Analysis framework to predict KPIs. **Java, Weka ML, AWS, Docker**

GroopLab, Berlin, Germany

DATA SCIENTIST > JUNE 2014 – JUNE 2015

- R&D of Machine-Learning methods for event recommendation. **Python, scikit-learn, Java, AWS**

VOLUNTEERING

DBpedia Association, Leipzig, Germany

LEAD MENTOR, ORGANISATION ADMIN (REMOTE) > FEBRUARY 2017 – PRESENT

- Org Admin for [Google Summer of Code](#) (GSoC) at [DBpedia](#), a Multilingual Semantic Knowledge Graph.
- Lead Mentor of 13 open-source projects on Deep Learning for and over Knowledge Graphs. 85% of the students joined the programme as co-mentors the next year. **Python, TensorFlow, Keras, SPARQL**

EDUCATION

University of Leipzig, Leipzig, Germany

PHD* IN COMPUTER SCIENCE > JULY 2012 – OCTOBER 2018

University of Milan-Bicocca, Milan, Italy

MASTER OF SCIENCE IN ARTIFICIAL INTELLIGENCE > NOVEMBER 2008 – MARCH 2012

Polytechnic of Milan, Milan, Italy

BACHELOR IN COMPUTER ENGINEERING > SEPTEMBER 2003 – SEPTEMBER 2008

ABOUT ME

- Team player, self-starter, lateral thinker, good at presentations, excellent at brainstorming.
- [Drummer](#) since 1996. 200+ live shows, 4 albums and 3 EPs published.
- Interests: prog music, genealogy, quant finance, quantified self, football, gaming, VR, science fiction.
- EU citizen, settled status in the UK, no VISAs/sponsorships needed.
- Languages: Italian (native), English (full proficiency), French & German (basic).

SELECTED PUBLICATIONS & AWARDS

Tommaso Soru, Abdulsobur Oyewale, [LLM-Driven Ontology Construction for Enterprise Knowledge Graphs](#). IEEE ICSC, 2026.

Tommaso Soru, Jim Marshall, [Anticipating the Future with Large Language Models](#). IEEE ICSC, 2025. **Industry paper; AI-driven strategic foresight**

Tommaso Soru, Jim Marshall, [Trend Extraction and Analysis via Large Language Models](#). In proceedings, IEEE ICSC, 2024. **First industry paper; AI-driven strategic foresight**

Anand Panchbhai, **Tommaso Soru**, Edgard Marx, [Exploring Sequence-to-Sequence Models for SPARQL Pattern Composition](#). In proceedings, KGSWC, 2020. **First publication as a supervisor**

Diego Moussallem, **Tommaso Soru**, Axel Ngonga, [Neural Translation and Enrichment of Knowledge Graphs](#). In proceedings, ISWC, 2019. **First-of-its-kind research application**

Tommaso Soru, Edgard Marx, André Valdestilhas, Diego Esteves, Diego Moussallem, Gustavo Publico, [Neural Machine Translation for Query Construction and Composition](#). Extended Abstract, ICML Workshop on Neural Abstract Machines & Program Induction (NAMPI v2.0), 2018. **Organised by DeepMind; travel grant from NEAR.ai**

Muhammad Saleem, Alexander Potocki, **Tommaso Soru**, Olaf Hartig, Axel Ngonga, [CostFed: Cost-Based Query Optimization for SPARQL Endpoint Federation](#). In proceedings, SEMANTICS, 2018. **Best paper award**

Tommaso Soru, Edgard Marx, Diego Moussallem, Gustavo Publico, André Valdestilhas, Diego Esteves, Ciro Baron Neto, [SPARQL as a Foreign Language](#). SEMANTiCS, 2017. **Best poster nominee; most cited research poster ever of the SEMANTiCS conference; first-ever use of sequence-to-sequence models on knowledge graphs**

Tommaso Soru, Edgard Marx, Axel Ngonga, [ROCKER: A Refinement Operator for Key Discovery](#). In proceedings, WWW, 2015. **14% acceptance rate; 40+ citations**

Tommaso Soru, Axel Ngonga, [A Comparison of Supervised Learning Classifiers for Link Discovery](#). In proceedings, SEMANTiCS, 2014.

Complete list on [Google Scholar](#).