# Michael Wessel, PhD

*Résumé*

272 E Charleston Rd, Palo Alto, CA 94306
+1 (650) 817-5161
miacwess@gmail.com
https://www.michael-wessel.info
https://github.com/lambdamikel
https://www.linkedin.com/in/michael-wessel-53b99160/

## SUMMARY

AI researcher with 25+ years experience in knowledge representation, reasoning, planning, machine learning, and LLMs. Co-founder of an influential Semantic Web startup and senior scientist at SRI. Built ontology-based dialogue systems, multi-agent planners, semantic modeling frameworks, and domain-specific LLM pipelines. Strong record of innovation, patents, and publications. Experienced AI programmer, well-versed with contemporary and past AI technologies. Passionate in embedded systems and applications of Deep Learning.

## CORE SKILLS

AI Programming; Knowledge Representation & Reasoning; Semantic Web (OWL, RDFs, SPARQL); NLP & Dialogue Systems; Machine Learning & Deep Learning; LLM Prompt Engineering; Multi-Agent Planning; Embedded & Agentic Systems.

Critical & Analytical Thinking; Logical Thinking; Technical Writing; Results-Oriented; Team-Player.

## TECH STACK

Python, C, Java, JavaScript, Common Lisp, Prolog; PyTorch, scikit-learn, Pandas, matplotlib; GitHub; Docker; Linux/Bash; REST APIs; Databases; basic Web Development & Adminstration; EDA tools (KiCAD) & Embedded Systems.

## EXPERIENCE

**2022 TO NOW** (FT)

### SRI International, Artificial Intelligence Center
**Senior Computer Scientist**

COLLEAGUE collaborative robot project: Multi-agent HTN high-level action planner; Knowledge Management Project KMASS: LLM research, agentic architectures, and Concept Vector-based topic & user models.

**2017 – 2022** (FT)

### Advanced Computer Scientist (SRI)

COBRA resource-allocator & mission planner: test & evaluation harness; Domain-Specific Dialogue Workflow Modeling Language for medical VPAs; Architecture facade CNN classifier; Pathway Tools: x6 compilation speedup.

**2010 – 2017** (FT)

### Computer Scientist (SRI)

OntoVPA: Semantic Web-based dialogue management system; AURA Intelligent Textbook project: KR&R backend maintenance, knowledge factory support, KB-exports (OWL, TPTP, ASP, Silk).

**2004 – 2013** (FT/PT)

### Racer Systems GmbH & Co. KG
**Co-Founder, Developer, Consultant**

RacerPro: an OWL / Descr.Logics reasoner with hundreds of users.

**1998 – 2010** (FT)

### University of Hamburg & TUHH
**Research & Teaching Assistant**

Research: Sem. Web & Descr. Logics for Qualitative Spatial Reasoning.

## OBJECTIVE

A position that allows me to combine my passion for logic-based symbolic knowledge representation & reasoning with LLM- and Deep Learning-based approaches, working on the next generation of explainable, scalable, and less brittle "best of both worlds" neuro-symbolic KR&R systems.

## EDUCATION

| | |
|---|---|
| 2003 – 2008 | **Dr. rer. nat. Computer Science (PhD)** SUMMA CUM LAUDE Hamburg University of Technology |
| 1992 – 1998 | **Diplom Computer Science (MSc)** UNIVERSITY OF HAMBURG |

## AWARDS

| | |
|---|---|
| 2021 | **Top 25% PC Member Recognition** *AAAI-2021 Programm Committee* |
| 2021 | **Hackaday ReinventedRetro Contest Winner** My passion for embedded systems paid of. |
| 1999 | **Basic Scholarship Award for PhD Studies** *A two-year grant from the University of Hamburg.* |

## SELECTED PROJECTS

| | |
|---|---|
| 2003 – 2021 | A Tangram-Playing Lisp Program A Tangram puzzle solver using AI-search. |
| 2018 | OntoVPA Ontology-Based Dialogue Management. |
| 2010 | OWLlink Functional Binding W3C Submission, Semantic Middleware. |

## CERTIFICATES

| | |
|---|---|
| 2021 | Natural Language Processing Specialization Coursera Credential ID 5WET5A3CCPLE |
| 2020 | TensorFlow in Practice Specialization Coursera Credential ID 7ZCFNHKC7GJB |
| 2018 | Deep Learning Specialization Coursera Credential ID P8XJW33AWR56 |

## PUBLICATIONS & PATENTS

- `https://scholar.google.com/citations?user=hAweuA0AAAAJ&hl=en`

- `https://www.semanticscholar.org/author/Michael-Wessel/145546968`