

# Simon STEPHAN Ph.D

SENIOR SOFTWARE ENGINEER & ARTIFICIAL INTELLIGENCE RESEARCHER

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## OBJECTIFS

**Hybrid profile at the crossroads of academic research and applied software development.** With over 10 years of experience in web/mobile development, 5 years in project management, and 2 years in team leadership, I contribute across the full lifecycle of innovative digital solutions. My ability to collaborate with diverse stakeholders makes me a strategic asset for any organization seeking to combine scientific excellence with operational efficiency.

## COMPÉTENCES

### Research & Innovation

- AI (symbolic, hybrid, data-driven)
- Multi-agent systems, complex systems simulation
- Ontological modeling, knowledge representation
- Scientific methodology, peer-reviewed publications
- Data mining and advanced analytics

### Software Engineering

- Web & mobile development (full stack)
- Python, Java, SQL, C/C++, Shell scripting
- LLM / NLP / Retrieval-Augmented Generation
- Ontologies: OWL, RDF, SPARQL, Protégé
- DevOps: Docker, Git, CI/CD, SQL/NoSQL, Neo4j, Elasticsearch

### Leadership & Management

- Technical project management (planning, coordination, QA)
- Cross-functional team supervision (up to 5 engineers)
- Client requirements gathering & solution design
- Technical documentation, functional specifications
- Mentoring, training, and technical communication

### Soft Skills & Others

- Adaptability, autonomy, scientific rigor
- Analytical thinking, synthesis, critical reasoning
- Intercultural communication (France, Brazil, India)
- Pedagogy, mentoring, and public speaking
- Professional working proficiency in English

## TECHNICAL STACK

### Machine Learning

Keras, Numpy, Pandas, PyTorch, Scikit Learn, Scipy, Tensorflow

### Languages

Java, Python, C++, C, Bash  
**Web**  
PHP, HTML, CSS, JS

### Databases

Neo4j, SQL, NoSQL

### Mobile

Java (Android), Swift (iOS)

### Tools & Cloud

Git, Google Cloud, AWS, Conda, Cloudflare, Docker, Kubernetes

### Frameworks

SpaCy, Yolo, Angular, Django, React, Laravel, Mesa, Ollama, Jira, Latex

## EXPÉRIENCES PROFESSIONNELLES

### Postdoctoral Researcher in Artificial Intelligence

2025 - Present • CIAD, UTBM, UBE • Dijon, France

- Designed a knowledge ontology for nuclear facility maintenance
  - Developed an AI agent for optimized action-path planning
  - Implemented a 3D simulation module and a reactive LLM prototype
- 3 papers under review | Reduced maintenance time | Real-time simulation

### Ph. D in Artificial Intelligence

2022 - 2024 • CIAD, UTBM, UBE • Dijon, France

- Developed a hybrid AI model combining MAS and biomedical ontologies
  - Simulated biological processes and analyzed heterogeneous datasets
  - Delivered a functional prototype for therapeutic target discovery
- 1 peer-reviewed journal article | Interdisciplinary collaboration

### Freelance Developer & Trainer

2013 - 2022 • Agoraweb • Dijon, France

- Built custom web/mobile applications for clients in various sectors
  - Led technical projects in collaboration with academic institutions
  - Trained students in universities, engineering schools, and vocational programs
- +15 projects delivered | Private & public sector clients | Tech curriculum design

### Chief Information Officer

2012 - 2013 • ADP Courtage Plus • Beaune, France

- Managed a 5-member IT team and supervised internal system integration
  - Maintained secure and high-availability infrastructure (99.9% uptime)
  - Developed internal tools improving processing time by 50%
- Full software suite deployment | Digital transformation | High-impact operations

### Back-end developer

2012 • Bazarchic • Paris, France

- Optimized e-commerce databases with over 20,000 SKUs
  - Migrated legacy PHP4 systems to PHP5
  - Integrated user-facing features and improved system performance
- 4M+ users | Performance gains | UX & data consistency

### Quality Assurance Developer

2012 • RingMédia • Paris, France

- Conducted validation and performance testing on production apps
  - Collaborated with international teams in Brazil and India
  - Implemented agile QA workflows and performance tuning
- Global collaboration | Agile QA adoption

## FORMATIONS

### Ph. D

### Artificial Intelligence

2025 • Univ. Tech. Belfort Montbéliard

Research on multi-agent modeling of biological processes; development of bioinformatics tools for cancer research.

### M. Sc.

### Artificial Intelligence

2011 • Univ. Bourgogne Europe

Machine learning, data mining, expert systems; thesis on image enhancement algorithms.

### B. Sc.

### Mathematics & Computer Science

2009 • Univ. Bourgogne Europe

Mathematical modeling, algorithms, data structures; scientific computing.

### Associate degree

### Computer Science

2008 • IUT Dijon

Software development (C, Java, SQL), algorithm design, software architecture

## COMMUNITY INVOLVEMENT

### MENSA France

2022 - 2023 • Regional President (BFC)

Led regional events and coordinated local communities nationally.

### Junior Chamber International (JCI)

2017 - 2020 • Treasurer

Oversaw budgeting and financial operations for local civic projects.

### French Cancer Society

2016 • Volunteer Member

Logistical support during public awareness and fundraising events.

### Animal Welfare Society

2015 • Volunteer Member

On-site animal care and adoption support.