



Vinasétan Ratheil Esse HOUNDJI

PhD in Engineering Sciences (Computer Science – Artificial Intelligence and Optimization).

Associate Professor at the University of Abomey-Calavi.

<https://ratheil.info>

Lecturer and Researcher / CAMES Associate Professor in Artificial Intelligence, *Institute for Training and Research in Computer Science (IFRI), University of Abomey-Calavi, <http://ifri-uac.bj>, Artificial Intelligence, Machine Learning, Operations Research/Optimization, Advanced Algorithms.*

Head of the Software Engineering Department, *Institute for Training and Research in Computer Science (IFRI), University of Abomey-Calavi, <http://ifri-uac.bj>*

Coordinator of Bachelor's and Master's Programmes – Software Engineering, Artificial Intelligence, Computer Security, Embedded Systems and Internet of Things, and Internet and Multimedia, *Institute for Training and Research in Computer Science (IFRI), University of Abomey-Calavi, <http://ifri-uac.bj>*

BWAI General Co-Chair, *Five editions of the national Benin Workshop on Artificial Intelligence (BWAI) since 2018, <https://bwai.ifri-uac.bj>*

ACPSS'25 General Chair, *20th edition of the ACP Summer School, 2025 – the first African edition of this international summer school on Constraint Programming, <https://school.a4cp.org/summer2025/index.html>*

Competition Chair, *Six editions of the MAIC international artificial intelligence competition, Mify Artificial Intelligence Contest, 2017–2022, <https://maic.mify-ai.com/>*

Member of the programme committees of several conferences, *CP, JFPC, CARI, etc.*

Member, *Association for Constraint Programming (ACP), Leading international association for the Constraint Programming community, <https://www.a4cp.org/>*

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Education & Selected Professional Development

- April–August 2025 **International Training Programme in Digital Higher Education Pedagogy**, *Université libre de Bruxelles (ULB), Belgium*, Top-ranked participant / Chaire du Sud Fellow.
- 2021 **Master Class for Teaching Online**, *Arizona State University, USA / Online*.
- 2013–2017 **PhD in Engineering Sciences (Computer Science – Artificial Intelligence and Operations Research)**, *Louvain School of Engineering (EPL)/Institute of Information and Communication Technologies, Electronics and Applied Mathematics (ICTEAM, UCLouvain)*, and *Doctoral School of Engineering Sciences (ED-SDI)/Institute for Training and Research in Computer Science (IFRI, UAC)*.
- 2016–2017 **Research Training in Engineering Sciences**, *Université catholique de Louvain (UCLouvain, Belgium)*.
- 2012–2013 **Master of Science in Computer Science**, *Louvain School of Engineering (EPL/UCLouvain)*, Louvain-la-Neuve, Belgium.
Grade: Distinction. 15/20.
- 2011–2012 **Advanced Courses in Computer Science and Research**, *Computer Science Training and Research Centre (CeFRI/UAC)*, Abomey-Calavi, Benin.
Average grade: 17.04/20.
- 2005–2011 **Engineering Degree in Computer Science and Telecommunications**, *Polytechnic School of Abomey-Calavi (EPAC) / Computer Science and Telecommunications Engineering, specialization in Computer Networks and Internet*.
Honours: Good. 15.33/20, graduated top of the class.
- 2004–2005 **Scientific Baccalaureate, Series C (Mathematics and Physical Sciences)**, *Collège La Flèche, Cotonou*.
Honours: Good. 14.45/20.

Professional Experience

Selected Research Projects

- 2026– **Southern Coordinator**, *OpenCS4Dev Project (Open Computer Science for Development)*, Project funded by ARES/Belgium. It supports the sustainable pooling of computer science teaching resources between UCLouvain (Belgium) and the University of Abomey-Calavi (UAC, Benin).
- 2026– **Southern/Benin Coordinator**, *ForCES Project, Systemic Analysis of Policies and Practices for the Co-design of a Continuing Professional Development Infrastructure in Digital Higher Education Pedagogy: the Cases of Benin and Senegal*, Project funded by ARES/Belgium. It aims to improve the quality of higher education in Benin and Senegal through an analysis of relevant policies and practices.
- 2025– **Lead, Work Package 2 / AI and IoT**, *STOP-NCD Project, Transformative and Optimized Strategy for the Prevention of Non-Communicable Diseases*, Project funded through the UAC Competitive Research Fund. It aims to develop an integrated and innovative strategy for the effective prevention of non-communicable diseases in Benin.

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- 2024– **Project Lead**, *AI4CKD Project, Artificial Intelligence for Chronic Kidney Disease*, Project funded by Google. It aims to develop a system for predicting stages of chronic kidney disease (CKD) in African settings, particularly in Benin.
- 2024-2025 **Southern Coordinator**, *Opti'Plan Project, Methods and Tools for Automated Thesis-Defence Scheduling*, Project funded by ARES/Belgium. This applied research project in artificial intelligence and optimization develops new optimization models for automatically scheduling thesis defences in large university programmes in Benin.
- 2024– **Member**, *IoT4Pest Project, “Smart Sensor Networks for Monitoring Agricultural Environments: Application to Pest Monitoring on Farms in Sub-Saharan Africa”*, Project funded by Inria/France. This research project develops new pest-control methods based on an IoT-enabled crop-monitoring network.
- 2024– **Member**, *PATH Project, Capacity Building of African Young Scientists in Precision Agriculture Through Cross-Regional Academic Mobility for Enhanced Climate-Smart Agri-Food Systems*, Project funded by the European Union.
- 2021– **Member**, *AI4Cardio Project (Artificial Intelligence for Cardiology), an AI-based Framework for Cardiovascular Disease Prevention and Monitoring*, Project funded by AFD/France. This regional project brings together academics and cardiologists from Benin and Senegal. It aims to develop a remote patient-monitoring system and AI-based approaches for the early detection and prevention of cardiovascular diseases in Africa.

Selected Consulting and Advisory Assignments

- May 2026 **Chaire du Sud – FIPUN 2026 Trainer (ULB, Belgium) on Digital Tools in Higher Education**, *Delivered a series of workshops on digital tools for higher education teaching as part of the International Training Programme in Digital Higher Education Pedagogy (FIPUN) for academics from nine countries.*
- April 2026 **Expert in Artificial Intelligence and Digital Technologies for the Ministry of Higher Education and Scientific Research**, *Contributed to the development of the national digital education strategy.*
- 2025 **Artificial Intelligence Expert**, *Developed a guide and trained stakeholders in the evidence ecosystem on the use of artificial intelligence to produce, mobilize and use evidence.*
- 2024 **Infrastructure and Artificial Intelligence Expert**, *Contributed to the feasibility study for Benin’s National Artificial Intelligence and Big Data Strategy (SNIAM).*
- 2023 **Artificial Intelligence Expert**, *Contributed to mapping current and potential stakeholders in Benin’s artificial intelligence ecosystem.*
- 2022 **Artificial Intelligence and Technology Expert**, *Contributed to the development of Benin’s National Artificial Intelligence and Big Data Strategy (SNIAM).*
- October 2022 **Expert – Development of a Regional Cybersecurity Capacity-Building Policy**, *OCWAR-C (Organised Crime: West African Response on Cybersecurity and Fight Against Cybercrime).*
- July– October 2022 **Expert – Continuing Education Programme “Artificial Intelligence for Finance”**, *Contributed to the design of the programme and served on its teaching team, Sèmè City and Sorbonne University.*

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- March–July 2022 **Artificial Intelligence and Digital Entrepreneurship Expert, Programme Committee**, *Contributed to organizing Benin’s Digital Entrepreneurship and Artificial Intelligence Exhibition (SENIA).*
- July–December 2021 **Artificial Intelligence and Technology Expert**, *Contributed to developing the strategic and operational plans of Burkina Faso’s Presidential Innovation Centre for Human Capital.*

Selected University Courses

Artificial Intelligence and Applications / Machine Learning, *Institute for Training and Research in Computer Science (Master’s/IFRI), UAC*, Since the 2014–2015 academic year

Tools for Solving Complex Problems, *Master’s/IFRI, UAC.*, Since the 2015–2016 academic year

Advanced Algorithms, *Master’s/IFRI, UAC.*, Since the 2019–2020 academic year

Optimization Problem-Solving Tools, *Bachelor’s in AI/IFRI, UAC.*, Since the 2022–2023 academic year

Machine Learning Concepts and Applications, *Bachelor’s in AI/IFRI, UAC.*, Since the 2022–2023 academic year

Search-based Problem-Solving Techniques, *Bachelor’s in AI/IFRI, UAC.*, Since the 2022–2023 academic year

Object-Oriented Analysis and Design, *Bachelor’s/IFRI, UAC.*, Since the 2015–2016 academic year

Private-Sector Experience

- August 2017–September 2018 **Chief Executive Officer (CEO), Machine Intelligence For You (MIFY) Ltd., MIFY Ltd.**, Abomey-Calavi, www.mify-ai.com
- Supervised the preparation of technical and financial proposals.
 - Monitored the effective delivery of the company’s contracts.
 - Coordinated the activities of the “Artificial Intelligence and Applications” department.
 - Coached and supervised several technical projects within the company.
 - Prepared project proposals to secure funding, investors and partners.
 - Organized the MAIC artificial intelligence competition <https://maic.mify-ai.com>.
 - Served as the company’s administrative representative.

Academic Administration

- 2022– **Head of the Software Engineering Department**, *Institute for Training and Research in Computer Science (IFRI, UAC)*, Abomey-Calavi, www.ifri-uac.bj
- January 2019–July 2022 **Coordinator of Master’s Programmes in Software Engineering, Computer Security, and Information Systems and Computer Networks**, *Institute for Training and Research in Computer Science (IFRI, UAC)*, www.ifri-uac.bj
- January 2018–December 2018 **Head of the Third-Year Software Engineering and Computer Security Teaching Units**, *Institute for Training and Research in Computer Science (IFRI, UAC)*, Abomey-Calavi, www.ifri-uac.bj

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2015– **Contributed to the design and validation of several degree programmes, IFRI Bachelor's/Master's programmes in Artificial Intelligence, Software Engineering, Computer Security, and Internet and Multimedia; Master's programme in Hydroinformatics at the National Water Institute (INE).**

Other Experience

- May 2026 **Visiting Professor, ICTEAM, Université catholique de Louvain (UCLouvain), Belgium**
- 2025 **General Chair of the 2025 Association for Constraint Programming Summer School, First edition held in Africa.**
<https://school.a4cp.org/summer2025/index.html>
- 2023–2026 **President, Ratheil Foundation for Responsible and Efficient Artificial Intelligence (FRIARE),** <https://friare.org/>
- 2014– **Supervised or co-supervised approximately 50 Master's, Engineering and Bachelor's theses**
Selected supervised theses are listed at <https://ratheil.info/thesis.php>
- 2014– **Member or Chair of numerous thesis defence committees**
- January– **Visiting Researcher, Artificial Intelligence & Algorithms research group, Université catholique de Louvain (UCLouvain), Belgium**
- March 2020
- 2018–2019 **Curator (Lead), Global Shapers Community (GSC) – Cotonou Hub, GSC is a World Economic Forum initiative operating in 156 countries and 381 cities,** <http://globalshapers.org/>
- 2020–2021 **Founder and Coordinator, Startup Grind University of Abomey-Calavi,** <https://www.startupgrind.com/>
- 2019– **Member of the programme committees of international conferences, International Conference on Principles and Practice of Constraint Programming (CP), French-Speaking Conference on Constraint Programming (JFPC)**
- 2018 **Contributed to the design and validation of a project to establish a Centre of Excellence in Water and Sanitation, IFRI representative for the Hydroinformatics component, Project approved for US\$6 million in World Bank funding**

Languages

French Excellent.
English Good.

Personal Qualities

- Strong sense of responsibility
- Strong analytical, synthesis and critical-thinking skills
- Team spirit and leadership

Interests

- Civic engagement and community service.
- Sports: football, volleyball and badminton.
- Cinema: comedy and thrillers.
- Games: strategy board games, social deduction games and video games.

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