Boammani Aser **Lompo**

Msc

Research & Work Experience

2021 | **Internship, Department of Statistics, CREST, ENSAI**
INTERN · Rennes 📍
Research on unimodal bandits for ranking systems. Keywords: Recommender Systems, Multi-armed Bandits, Learning to Rank. Supervisor: Romaric Gaudel

2020 | **Internship in a Research Laboratory in Cryptology, INRIA**
INTERN · Paris 📍
Measuring privacy of cryptographic systems and studying the properties of optimal-privacy systems. Supervisor: Catuscia Palamidessi

Degrees

2025 **MSc in Computer Science**
NLP · Ecole Technologie Superieure (Montreal) 🏛

2023 **MSc in Mathematics, Vision and Learning**
· Ecole Normale Superieure (Paris) 🏛

2021 **MSc in Fundamental Mathematics**
· Ecole Normale Superieure (Rennes) 🏛

Programming

Pytorch
TensorFlow
JAX
C++
JavaScript

Portfolio

Visual-TableQA
- **2.5k** high-quality and complex images
- **9k** reasoning intensive QA pairs
- Cost-efficient pipeline (**<$100**)
- Effective for Finetuning (**+ 17%**)
- Github

LLM-Number Encoding
- Simple LLM Encoder Upgrade
- Effective on numerical reasoning tasks (**+ 12%**), Github

More on my webpage.

Certificates & Grants

2024 Recipient of R-SADC scholarship 2024 (**23,000$**)
2018–22 French Government Excellence Grant (**50,000$**)
2024 Best Poster Presentation **Acfas 2024**
2014 Honourable Mention at the International Mathematics Olympiade (**IMO**) in Cape Town 2014
2015 **Gold medal** at the Panafrican Mathematics Olympiade in Abuja
2015 Winner of the National Math Contest in Burkina Faso 2015

Languages

English | Fluent (C2)
French | Native (C2)

Publications

2025 Boammani Aser Lompo, Marc Haraoui. *MODALITY-SWAP DISTILLATION: Rendering Textual Reasoning into Visual Supervision.* Under review as a conference paper at **ICLR 2026**
2025 Boammani Aser Lompo, Marc Haraoui. *Visual-TableQA: Open-Domain Benchmark for Reasoning over Table Images.* **NeurIPS 2025** Workshop on Foundations of Reasoning in Language Models. [PDF]
2024 Boammani Aser Lompo, Thanh-Dung Le, Philippe Jouvet, Rita Noumeir. *Multi-objective Representation for Numbers in Clinical Narratives: A CamemBERT-Bio-Based Alternative to Large-Scale LLMs.* **CoRR 2024**. [PDF]
2021 Camille-Sovanneary Gauthier, Romaric Gaudel, Elisa Fromont, Boammani Aser Lompo. *Parametric Graph for Unimodal Ranking Bandit.* **ICML'21**. [PDF]

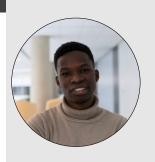### About me

MSc in Mathematics and Machine Learning with strong expertise in Visual Reasoning, Reinforcement Learning, and Applied Mathematics. Passionate about advancing multimodal AI and bridging theoretical and applied research.
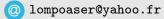
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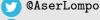
https://aser97.github.io/Blog/

Areas of specialization

NLP · LLM · RL · Maths

Interests

- Photography & Content Creation
- **Competitive Chess (2000 Elo)**

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