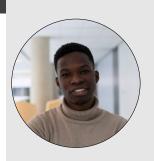
Boammani Aser Lompo

Msc



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.

Webpage

https: //aser97.github.io/Blog/

Areas of specialization

NLP · LLM · RL · Maths

Interests

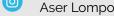
- Photography & Content Creation
- Competitive Chess (2000 Elo)



lompoaser9@gmail.com



@AserLompo



Aser97

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) <u>m</u>

2023 MSc in Mathematics, Vision and Learning

· Ecole Normale Superieure (Paris) 🏛

2021 MSc in Fundamental Mathematics

· Ecole Normale Superieure (Rennes) 🏛

TECH STACK

Languages: Python • JavaScript • C++ • Bash • HTML/CSS

Frameworks: PyTorch · Transformers · JAX · Hugging Face ·

APIs

Tools: Docker • Paperspace

Focus Areas: Visual Reasoning · Number Encoding · Rein-

forcement Learning • Mathematics

Portfolio

Visual-TableQA ·2.5k high-quality and complex images

9k reasoning intensive QA pairsCost-efficient pipeline (<\$100)

•Effective for Finetuning (• 17%)

Github

LLM-Number·Simple LLM Encoder Upgrade

Encoding • 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 Abuia

2015 Winner of the National Math Contest in Burkina Faso 2015

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]

LANGUAGES

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