

Aissatou Diallo

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EXPERIENCE

Postdoctoral Researcher in NLP & ML

March 2022 – Present

University College London

London, UK

- Led the development of datasets for commonsense reasoning in LLMs and co-authored research on repurposing theory in AI.
- Published findings on AI's role in commonsense reasoning for disaster management, contributing to both academic knowledge and practical applications.

Machine Learning Engineer Intern

April 2017 – October 2017

Credit Agricole SA

Paris, France

- Developed and deployed NLP-driven tools for classifying 1630 cybersecurity vulnerabilities, achieving a 90% accuracy rate and reducing manual workload for risk assessment by 40%.
- Implemented an automated system to generate audit report summaries, reducing preparation time by 50% while maintaining 90% accuracy in capturing critical data.
- Collaborated with a cross-functional team to integrate machine learning models into financial audit systems, enhancing real-time analytics capabilities.

SKILLS

Languages : Italian (native), French (native), English (fluent), Spanish (C2), German (B1)

Research Interests : NLP, ML, AI, Commonsense Reasoning, Analogical Reasoning, Optimization, ML for social good.

Research Tools: Pytorch, Python, Git, GPU/CUDA, docker

Reviewing: ICLR 2024, NeurIPS 2024, EMNLP 2023, AAAI 2023-2024-2025, ECAI 2024, ECML-PKDD 2022

SELECTED PUBLICATIONS

2024 |

- *A Graphical Formalism for Reasoning about Substitution in Resource Transforming Procedures*, under review for JAIR - A. Bikakis, A. Diallo, L. Dickens, A. Hunter, R. Miller
- *PizzaCommonSense: Learning to Model Commonsense Reasoning about Intermediate Steps in Cooking Recipes*, under review for EMNLP. - A. Diallo, A. Bikakis, L. Dickens, A. Hunter, R. Miller
- *IAO prompting: Forcing Large Language Models to Show their Reasoning through an Input-Action-Output Template*, under review. - A. Diallo, A. Bikakis, L. Dickens, A. Hunter, R. Miller
- *Evaluating Commonsense Reasoning about Disaster Management*, under review for NeurIPS - A. Diallo, A. Bikakis, L. Dickens, A. Hunter, R. Miller

2023 |

- *A Commonsense Reasoning Framework for Substitution in Cooking* under review for Data & Knowledge Engineering - A. Bikakis, A. Diallo, L. Dickens, A. Hunter, R. Miller
- *Unsupervised Learning of Graph from Recipes*, preprint. - A. Diallo, A. Bikakis, L. Dickens, A. Hunter, R. Miller

2019 - 2021 |

- *Learning Ordinal Embedding from Sets*, Entropy 2021. - A. Diallo, M. Zopf, J. Furnkranz
- *Permutation Learning via Lehmer Codes*, ECAI 2020 - A. Diallo, M. Zopf, J. Furnkranz
- *Learning Analogy-Preserving Sentence Embeddings for Answer Selection*, CoNLL 2019 - A. Diallo, M. Zopf, J. Furnkranz

EDUCATION

TU Darmstadt

Darmstadt, Germany

Ph.D. in Computer Science – Magna cum Laude

August 2018 - July 2022

CentraleSupélec

Gif-sur-Yvette, France

M.Sc. in Computer Engineering – GPA: 4.0/4.0

September 2015 - October 2017