Aboubacar TUO

AI/NLP PhD Student

✉ aboubacar.tuo@cea.fr

📞 +33 656802188

📍 Palaiseau, France

EDUCATION

2018 - 2020
Paris, France

Mines Paristech
Engineering degree: Applied Mathematics, Robotics, Vision

2015 - 2020
Cachan, France

École Normale Supérieure Paris-Saclay
MSc: Automation, images and signal processing
L3 SAPHIRE: mechanical, electrical, and civil engineering common core

2013 - 2015
Angers, France

Lycée Saint Aubin La Salle
Two years of preparatory classes for the entrance examinations to the french «grandes écoles»

RELEVANT EXPERIENCES

10/2020
Today
Paris, France

Commissariat à l'Energie Atomique (CEA – List)
PhD Student
- ✓ Natural language processing and Deep Learning
- ✓ Few-Shot Information Extraction for domain adaptation
- ✓ Three conference papers
- ✓ Teaching assistant at Paris-Saclay University and CentraleSupelec
  - Machine learning, Python, C++ & Cybersecurity

NLP, Deep learning, Few-shot learning, Transformers, Information extraction

01/2019
04/2020
Paris, France

Astek Group
Artificial intelligence engineer
- ✓ Recommender system that suggests customized articles to users in relation to their professional activities and interests
- ✓ Task-oriented Chatbot for a telecommunication company

Machine learning, Web scrapping, Text classification, Recommender system, Chatbots, Database

04/2017
08/2017
Paris, France

Pickup Services
Intern Data Scientist
- ✓ Mathematical modelling and simulation of a parcel relay to predict its behaviour (deliveries, withdrawals, and state of load) with the purpose of forecasting and anticipating operating anomalies in the relay point

Optimization, Statistical estimation, Machine learning, MATLAB, Python, SQL, Database

01/2019
04/2020
Abidjan, Côte d'Ivoire

Centre de recherche et d'application à la télédétection
Image processing Intern
- ✓ User interface for satellite image processing for the remote detection with basic image processing functions such as the filtering, calculation of gradient, outlines detection, circles, rights, points of interest, and two main applications: the detection of road traffic signs and the detection of continuous streams (roads and rivers)

Image processing, mathematical morphology, satellite image segmentation.

PROFIL

I am a third year PhD student working on information extraction, a domain that combines both deep learning and natural language processing and particularly focused on few-shot learning approaches for domain adaptation.

COMPUTATIONAL SKILLS

Programming:
- ✓ Python
- ✓ C/C++
- ✓ MATLAB/Simulink
- ✓ VHDL, FPGA, Bash
- ✓ HTML, CSS, JS, SQL, …

DevOps:
- ✓ Git, Docker, Selenium, …

Office:
- ✓ Latex/Lyx
- ✓ Microsoft Office

Multimedia:
Photoshop, Première pro, Ableton, Rekordbox, …

LANGUAGES

🇫🇷 French: Native

🇬🇧 English: Professional

🇪🇸 Spanish: Basic notions

INTERESTS

Volunteering:
Maison des jeunes talents, Dema1n.org, Nightline Paris

Music:
DJ & Producer

Sport:
Escalation & dance

Teaching

• 2020-2021: **Teaching assistant**
Paris Saclay University (Orsay, France)
- Machine learning / Python, C++, Security
eq. 62 hours

• 2021-2022: **Teaching assistant**
CentraleSupelec
- «Coding Weeks» (Python, Git, GUI)
eq. 25 hours

• 2022-2023: **Teaching assistant**
CentraleSupelec
- «Coding Weeks» (Python, Git, GUI)
eq. 48 hours

Publications

- **Trigger or not Trigger: Dynamic Thresholding for Few Shot Event Detection.** Aboubacar Tuo, Romaric Besançon, Olivier Ferret, Julien Tourille, in ECIR, 2023 (not published).
- **Better Exploiting BERT for Few-Shot Event Detection.** Aboubacar Tuo, Romaric Besançon, Olivier Ferret, Julien Tourille, in NLDB, 2022.
- **Mieux utiliser BERT pour la détection d'évènements à partir de peu d'exemples.** Aboubacar Tuo, Romaric Besançon, Olivier Ferret, Julien Tourille, TALN, 2022.

Doctoral courses

Scientific outreach:
- 25 july 2022 – 29 july 2022 : 40 hours
DeepLearn Summer School

- 7 july 2021 - 15 july 2021 : 55 hours
Lisbon Machine Learning Summer School (LxMLS)

- Feb. 2022 - march 2022 : 15 hours
Ethics & Open Science

Transvers:
- 08 feb. 2021 - 9 feb. 2021: 14 hours
Construire votre thèse et votre projet professionnel

- 07 sept. 2021 - 7 sept. 2021: 5 hours
Writing and publishing research papers

- 15 Sept. 2022 : 5 hours
Impacts environnementaux du numérique

Conferences & seminars

- NLDB 2022
- NAACL 2021
- TALN 2021 & 2022
- "Critique de l'Intelligence Artificielle" seminars (ENS Paris-Saclay)
- Séminaires des doctorants (CEA List)
- LxMLS 2021 (summer school)
- DeepLearn 2022 (summer school)
- UDOPIA PhDay (Poster session)