Martin Rodrigue Atangana Ongolo

Researcher / PHD Student(2021 - 2025) In machine learning focus on NLP, words representations embedings , machine translation, low resources languages && software engineer, fullstack developper

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About

As a multifaceted professional with a strong background in data science, machine learning, and software engineering, I am passionate about leveraging artificial intelligence to solve real-world problems. My work spans developing machine learning , natural language processing and machine translation models. I also manage and develop software projects, I also currently pursuing a PhD in machine learning, focusing on multilingual words embeddings and low-resource languages Tasks like machine translation, as well as methods and evaluation metrics for multilingual word embeddings. My thesis explores the developpment of new metrics to assess pertubations in multilingual word embeddings, utilizing graph theory, optimal transport and the theory of pertubations in vector spaces.

Skills Domain

Master Problem Solving, R&D Research in AI, Data science, machine learning (Scikit-Learn, Pytorch, Python), Representation learning, NLP (word embedding , SpeecBrain, Hugging face, Fairseq, Open NMT).

Work on large langage models like GPT and contextuals models like BERT, ROBERTA, FLAUBERT, GOT (Graph optimal transport), Word embeddings, MUSE (Multilingual unsupervised ans supervised embeddings), Graph theory, pertubation theory of vectors spaces.

Software engineering , Senior PHP Developer (Laravel Framework) , Java and javascript(nodejs) Senior developer with loopback JS Nest js and Express Js (nodejs) frameworks, vuejs, Expert Alfresco development, Project manager with the agile methodology (Scrum).

Experience

- Now i'm Freelance Data-Scientist and Software engineer

- From March - JULY 2024, I conducted a research mission at the computer science laboratory in Le Mans, France, to work on evaluating the quality of word

embeddings, graphs, and neural machine translation of low-resource languages for the European project ESPERANTO.

- From November 2022 – April 2023 I undertook a research mission at the computer science laboratory of Grenoble, France to work on monolingual and multilingual contextual models like BERT for developing an neural machine translation from French to the Ewondo language for the European project ESPERANTO

- R&D Engineer and Solution Integrator, QualisysConsulting, Dakar, Senegal (September 2020 - January 2023): Worked on IT systems for document management and educational resources.

- Build machine translation for Ewondo Cameroonian language (2021) for Bible translation

- Full Stack Developer, Bixterprise (January 2016 - June 2019): Lead a development team, managed projects, and developed web applications.

- Fullstack Developer, Yeswebbook, France (June 2021): Developed web interfaces and integrated APIs for a real estate publishing platform.

- Fullstack developer, Yozati, France (2018 - 2019) : we develop https://www.qui-go.com/ plateform

Education

- PhD Student in Machine Learning, University of Yaoundé 1, Cameroon (Since November 2021): Specializing in multilingual models & neural machine translation for low-resource languages.

- Master Research in Computer Science, University of Yaoundé 1, Cameroon (2019-2021). I defend my Master Thesis On subject multilingual word embeddings for neural machine translation of low resources languages, graduating with honors (17/20)

- I received a certificate for attending the summer school on the mathematical foundations of artificial intelligence in 2019. This laid the foundation for my career in artificial intelligence.

- Bachelor's degree in Fundamental Computer Science, University of Yaoundé 1, Cameroon (2016).

Publications

Plongement multilingue non supervisée basé sur le mapping monolingue pour la traduction automatique neuronale des langues faiblement dotées, CR'I 2021