



FOSSE LOÏC

Engineer Student in applied mathematics

@ loicfosse65310@gmail.com

@ loic.fosse@insa-rennes.fr

+33 6 42 18 62 31

Rennes , France

loïc-fosse-7abb711bb

lololofo

STRENGTHS

Team Spirit Hard Worker Sporty
Motivated Determined Curious

LEARNING

Programmation:

Python Bash Linux R

Julia C C++ \LaTeX MatLab

Deep Learning:

PyTorch / PyTorch Lightning

PyTorch Geometric

Plotly / Dash

LabelStudio

HuggingFace

LANGUAGES

French: Native

English: TOEIC : 940 (C1/B2)

HOBBIES

Surf KiteSurf WindSurf

Ski Touring Snowboard

Golf : 0.4 index / Hossegor team

EXPERIENCES

Question answering from conversations | Orange Innovation

Feb 2023 - Aug 2023

Lannion, France

- State of the art study.
- Study of the dialogical structure and linkage with graph theory.
- Use of generative language models such as Encoders / Decoders (T5, BART).
- Modification of the attention mechanism in T5 type models to integrate the dialogical structure.

Study of the plausibility of attention mechanism in BERT architecture in NLI task | IRISA

June 2022 - august 2022

Rennes, France

- Study of the state of the art
- Highlighting relations between attention and the geometry of hidden embeddings in BERT transformers for the e-SNLI task
- Development of a method to increase the plausibility of the attention mechanism in the BERT transformer for the e-SNLI task

Statistical analysis on the BERT/FlauBERT Transformers (NLP) | IRISA

Sept 2021 - July 2022

Rennes, France

- Study of hidden states in transformer-type architectures, pre-trained on French corpora and specialized on binary classification (FLUE/CLS task)
- Writing and submitting a research paper to TALN 2022 (Avignon, France) conference
- Presentation of the paper at the TALN 2022 conference

Mathematics Tutor for 2nd year students | INSA

Sept 2019 - June 2020

Rennes, France

- Corrections of mathematics exercises (Algebra, Analysis, Differential Geometry, Probability)
- Help with exam preparation

EDUCATION

Engineer in applied mathematics | INSA

sept 2020 - sept 2023

Rennes, France

- Probability: General probability theory, Markov Chains, Hidden Markov Chains , Continuous time Markov Chains , Stochastic differential equations
- Statistics: linear regression, generalized linear model, logistic regression, time series, data analysis (PCA, MCA, FCA)
- Optimization: Graph theory , Branch and bound algorithm

Exchange Study (Erasmus) | Abo Akademi

Jan-2022 - May-2022

Turku, Finland

- Deep Learning: optimization algorithms (Adam, AdaGrad, Adaptive learning)
- Machine Learning: Neural Networks (CNN , RNN , FC)
- Text algorithms: Pattern matching, suffix Trees

Integrated preparatory class | INSA

2018 - 2020

Rennes, France

High School | Jeanne d'Arc

2015 - 2018

Tarbes, France

- French HS diploma, Science major. Honors