Ali Janati

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Columbia Engineering Data Science MSc Candidate

EDUCATION

Columbia University   New York, NY
MSc. in Data Science   Aug 2023 - Dec 2024
- Relevant coursework: Algorithms for Data Science, Applied Machine Learning, Applied Deep Learning, Advanced Projects in Machine Learning, Deep Learning for NLP.
- Research Project: Working under Prof. Pierre Gentine as a Graduate Research assistant to fine-tune IBM - NASA geospatial Vision Transformer (ViT) foundation model for recognizing wind damaged forest areas through image segmentation.

Mines Paris   Paris, France
MSc. and BSc. in Engineering and Computer Science   Sep 2018 - Jun 2023
- French Top-ranking Master & Bachelor of Science, "Grande Ecole" program.
- Completed Joint Master of Engineering with ESPCI Paris - PSL.
- Relevant coursework: Applied Mathematics, Machine Learning, Applied statistics, Computer Science, Fundamental Physics.

Lycee Lakanal   Paris, France
BSc. in Applied Physics   Sep 2018 - Apr 2021
- Undergraduate program preparing for the highly competitive nationwide entrance exams to the Top-ranking French Schools of Engineering. (CPGE PCSI/ PC*).
- Relevant coursework: Mathematics, Physics, Chemistry, Computer Science, Linear Algebra, Calculus.

WORK EXPERIENCE

Ekimetrics   Paris, France
Machine Learning Engineer Intern   Nov 2022 - Apr 2023
- Engaged in Ekimetrics, a pioneering leader in data science and AI-powered solutions for industry.
- Built a NLP model to monitor market and competitor activity by identifying companies with positive mentions.
- Boosted existing models, achieving a 14% increase in f1 score by implementing and benchmarking advanced techniques ranging from random forest to transformer encoders.

Humanitics.ai, Station F   Paris, France
Machine Learning Engineer Intern   Apr 2022 - Oct 2022
- Contributed to Humanitics.ai, a retail-tech within world's largest startup campus: station F, and laureate of future 40 most promising startups in France in 2022.
- Shaped a traffic forecasting model to determine for each one of 500 stores, and each hour of the day in the future, the number of visitors leveraging sophisticated naïve models, prophet and PyTorch and exceeded performance expectations by 7% MAPE drop.

CNRS (French National Centre for Scientific Research)   Paris, France
Research Assistant in Computer Science   May 2021 - Aug 2021
- Spearheaded developments of python-based simulation models, significantly enhancing acoustic imagery through doppler effects, which time accelerated preliminary research outcomes by 15%.
- Conducted bibliographical research, implemented the relevant model for each experience, analyzed given data and results, worked mostly with scipy, sklearn, numpy and matplotlib libraries.

ESPCI & PSL University   Paris, France
Research Assistant in Deep Learning. Part-time   Nov 2020 - Apr 2021
- Operated in ESPCI & PSL research centers as a research assistant in order to classify images of bidimensional spin models according to whether the total topological charge is null or not.
- Developed and optimized multiple deep neural network architectures using PyTorch, achieving 93% recall in classifying bidimensional spin models, thereby enhancing predictive reliability and contributing to innovative research methodologies.

PROJECTS

Music Labs
- Developing a music centered application containing an Image to Music feature using a personalized version of Hugging Face hosted llava-v1.5-13b and a Sentence to Playlist recommendation feature using TFIDF.

Mini GPT
- Training a Transformer Decoder, inspired from the "Attention is all you need paper", on my machine learning lecture slides to be able to generate meaningful character level tokens.

SKILLS

Programming: Fluent in Python (Numpy, Pandas, ScikitLearn, PyTorch, Plotly, Hugging Face), Git, Google Cloud.
Languages: English (fluent, TOEFL score: 109/120). French and Arabic (native speaker). Proficient in Spanish.
Associative Work: Tutoring for preparatory classes (CPGE) and high school students, Data for Good.
Sports: Soccer (played in Raja Casablanca at a national level from 2009 to 2014), Fitness, Martial Arts.