NOUR GHRIBI
Data Scientist

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SUMMARY

Data Scientist with expertise in Natural Language Processing (NLP), LLMs, analytics solutions, and dashboard development, adept at translating complex data into actionable business insights. Fluent in English, and French with some knowledge of German, poised to contribute in a dynamic, multilingual environment effectively.

SKILLS

Coding: Python, Scala, Java, SQL, Bash, HTML.

Technologies: GCP, Spark, Pandas, NetworkX, PyTorch, Git, Docker, Linux, MS Office, MS Excel, MS PowerPoint.

Data Skills: Business Intelligence, KPI-development, Cloud-Infrastructure, Analytics.

EDUCATION

02/2020 – 10/2023 **M.Sc Data Science, minor Management of Technology and Entrepeneurship** **EPFL**
- Engaged in a comprehensive study of Machine Learning, Deep Learning, and Data Analysis.
- Participated actively in The Consulting Society in addition to taking some managerial and business-oriented courses, enhancing business acumen alongside technical expertise.
- **Extra-curricular activities:** The Consulting Society.

09/2015 – 01/2020 **B.Sc. Communication Systems** **EPFL**
- Focused on Computer Networks and Security, building a robust foundation in system analysis and design.
- **Extra-curricular activities:** Tunes.

EXPERIENCE

9/2022 – 3/2023 **Data Scientist Intern** **Compagnie Financière Tradition**
- Spearheaded the creation and enhancement of innovative internal financial tools as part of my master's thesis, refining financial analysis and proposing data pipeline optimizations for actionable insights.
- Developed visualization tools and dashboards (BI) for financial data analysis, enhancing stakeholder understanding and decision-making.
- Leveraged the power of graph representations to propose a new perspective and innovative angle on financial trade data.
- Provided financial analysis support for the CFO and the company's financial department.
- Presented intermediate results to the stakeholders and non-technical audience regularly.
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Data Analysis / Graph Theory / Anomaly Detection / Business Intelligence - BI
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2/2022 – 8/2022 **Data Analyst Intern** **Compagnie Financière Tradition**
- Developed and executed internal tools, facilitating data extraction, consolidation, analysis, and visualization.
- Managed real-world unstructured text data to derive crucial insights for informed financial decision-making.
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Data Engineering / Data Extraction / Regex / Software Engineering / Automation
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2/2021 – 12/2022 **Founder and Organizer** **Applied Machine Learning Days Africa**
- Co-founded and managed the African iteration of the prestigious Applied Machine Learning Days by EPFL (AMLD), demonstrating my organizational skills.

2/2021 – 6/2021 **Research Assistant** **Ecole Polytechnique Fédérale de Lausanne**
- Aided the Ph.D. and post-doctoral teams of the Distributed Computing Lab on research in federated learning.
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Python / PyTorch / Research
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9/2019 – 1/2020 **Teaching Assistant** **Ecole Polytechnique Fédérale de Lausanne**
- Teaching Assistant for the Object Oriented Programming course in Java.
- Collaborated with the teacher to recognize issues students are facing and recommend solutions.
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Java / OOP / Teaching
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LANGUAGES

English, French - C1, **German** - B2, **Arabic** - native

CERTIFICATIONS

06/2024   **Generative AI with Large Language Models**   **DeepLearning.AI & AWS**

- Gained in-depth knowledge of generative AI, practical experience with large language models, and explored the ethical considerations of AI usage. Additionally, I learned how to build and deploy AI-powered applications, fueling my passion for transforming industries through AI.

PROJECTS

Research
&
Time Series
Analysis

Predicting the "Present" with Google trends   **Forecasting Stock Volatility**

- Leveraged Auto-Regressive models improved by time series data of Google search engine trends (*Predicting the "Present" with Google Trends*) to predict index volatility in financial markets.
- Concluded the project by presenting the results in a storytelling style on a Data-Story website.

  `Time Series / Applied Data Analysis / Research`

Deep Learning:
NLP
&
Computer Vision

Visiolinguistic Image Search

- Reviewed and extensively researched State-Of-the-art Machine Learning models to replicate and combine them in a creative setting.
- Concluded the project by Implementing a proof of concept on Fashion Data that leverages Interactive Image Retrieval, Keyword Extraction, and Image Clustering.

  `Multi-Modal Machine Learning / PyTorch / Python`

Big Data
&
Recommender
Systems

K-NN Movie Recommender System

- Engineered a scalable movie recommendation system using collaborative filtering, leveraging Apache Spark and Scala for processing large-scale user rating data.
- Analyzed and optimized deployment strategies for cost-efficiency and performance, demonstrating adeptness in big data solutions and machine learning applications.

  `Big Data Analysis / Machine Learning / Scala / Spark`

Deep Learning

PyTorch Framework Exploration

- Delved into deep learning by rebuilding PyTorch's core modules, mastering neural network principles and implementation techniques.
- Constructed and fine-tuned sequential neural networks, focusing on linear layers and activation functions.
- Demonstrated proficiency in complex architectures through the development of Siamese Networks for MNIST dataset digit comparison.

  `Deep Learning / Neural Networks / PyTorch / Python`

Machine Learning
& NLP

Sentiment Analysis of Tweets

- Conducted sentiment analysis on Twitter data using a range of machine learning models, from simple linear classifiers to advanced deep learning techniques, enhancing my expertise in Python and NLP.
- Successfully implemented and fine-tuned BERT, a state-of-the-art NLP model, on the Google Cloud Platform, demonstrating my proficiency in leveraging cloud technologies for complex machine learning tasks.

  `Deep Learning / NLP / Python / LLM / Google Cloud Platform`

Deep Learning
&
Data Analysis

Blockbuster movies recipe

- Used the TMDB movies data to try to uncover what constitutes a blockbuster movie. (Feature engineering, ML models)

  `Deep Learning / XGBoost / Python`

Big Data
&
Data Analysis

Robust Journey Planner

- Improved SBB-CFF journey planner by considering historical success rates using statistical modeling

  `Big Data Analysis / Spark / Hadoop / Python`