DHIA GHARSALLAOUI

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WORK EXPERIENCE

Data scientist - RTE

June 2021 - Present Paris

- Read study of interconnected energy systems configurations
- Prepare intermediate configuration
- Develop script to interact with Antares software and run the simulations.
- Extract results data of simulations
- Develop Dynamic programming algorithms to calculate water values
- Read and implement economic and technical constraints
- Build different plot modules
- Build the scripts in R package
- Develop a Web App to facilitate interaction and manipulation of the package
- Avoid dimensionality curse using Machine Learning approach

Engineer Intern - BIAT

July 2020 - September 2020 Tunis

- Design of a Reporting tool for BIAT's tourism subsidiaries. This tool contains different functionalities in order to gather the data of the hotels, analyze them and give a complete graphical vision to the manager.

Project Intern - TELNET

January - May 2020 Tunis

Realization of an autonomous line follower robot on ROS using Reinforcement Learning algorithms and comparison between the performances of the different algorithms. This project includes the preparation of the ROS software environment, the implementation of the algorithms with Open AI Gym and the learning in simulation on GAZEBO.

Internship trainee - AsteelFlash

June - August 2019 Tunis

Develop an interactive database in VBA language that calculates the plant's performance indicators and provides evolution curves of the KPIs.

ACADEMIC PROJECTS

Decryption of Yuka algorithm

Construction of a database containing the composition of nutritional foods and their YUKA score. Analyze the database and identify possible models. Verify the models with machine learning approaches

Image classifier

Build a classifier model to distinguish between fields and roads. Use the both ML frameworks TensorFlow and Pytorch. Try self made CNN model and predefined VGG19 model. Use Data generator to improve train quality.

Predicting diabetic retinopathy and identifying interpretable biomedical features

- Identification of relevant variables: p-value.
- Use these variables in different models: Decision Tree, Logistic Regression, Artificial Neural Network, Support Vector machine SVM.
- Compare these models and choose the best one: SVM.

Chronic Kidney Disease: Clustering and Prediction

- Pre-processing: Data Cleaning and imputation.
- Exploratory Data Analysis: check correlations.
- Clustering & Prediction: K-means, k-means+PCA, Neural Network.

SUMMARY

I am a passionate Data and modelling engineer. Recent graduate with Master MODO (Modeling, Optimization, Decision, Organization) from Mines ParisTech and Paris Dauphine after an internship in RTE. I like automating things, building models, exploring scalability problems, improving efficiency and performance tuning.

EDUCATION

Computer science Master MODO (Modeling, Optimization, Decision, Organization), Mines ParisTech & Paris Dauphine

October 2020 - Present Paris

Industrial engineering , National Engineering School of Tunis -ENIT

September 2018 - Present Tunis

Preparatory cycle Mathematics and Physics - Mathematics and Physics, Preparatory Institute for Engineering Studies of Tunis - IPEIT

September 2016 - June 2018

SKILLS

- Python
- R
- Git
- VBA
- SQL
- Antares Simulator
- Arena simulator
- Pack Office

LANGUAGES

French - fluent

English - fluent

Arabic - native speaker