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## RESUME SUMMARY

- 📌 Data science, Business intelligence and Cloud computing skills.
- 📌 Theoretical and practical skills in Machine Learning.
- 📌 Fluency in Python, Computer vision and Data mining.
- 📌 Expertise in development, algorithms and optimization.
- 📌 Certificates in big data (IBM) and on-line courses (MOOC – Udemy).
- 📌 Realize several Machine Learning and Business Intelligence projects, academic and professional.
- 📌 High training (Engineering in ICT, major: management of technology innovation and data science – Higher school of communications of Tunis: Excellence school of Tunisia – accredited CTI).

## Skills

### BIG DATA

- **Technologies:** Hadoop, Mapreduce, Hbase, Jaql, BigSQL, Hive.
- **Machine learning:** SparkML, R, Python, scikit learn.
- **Text Mining:** Fiddler proxy, BeautifulSoup.
- **NoSql:** MongoDB.
- **Project management:** Agile.
- **Business intelligence:** KPI, ETL, SQL Server Data Tools, Data warehouse, SQL Server Integration Services, SQL Server Reporting Services SQL Server Analysis Services. Fluency in reporting and KPIs.

### DATA MINING

- **Predictive** analysis and techniques in data mining, price forecast.
- **Forecast** (decision trees, logistic regression, ElasticNet, Ridge, Lasso, XGBoost ...).
- **Extraction:** External data source route trace, extract, create mining bots to simulate client requests and automate extraction.

### MODELIZATION & DATA MANAGEMENT

- **Modelization:** Conceive and create data bases and data warehouses.
- **DBMS & data management:** (SQL) (MySQL, Sql Server, Oracle).
- **Web:** JSON, XML, JavaScript.
- **Open Data:** Identify, collect and merge with internal data.

## COMPUTER VISION

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- **Deep Learning:** Implement Machine Learning models that identify faces, words, etc. Fluency in Keras.
- **OpenCV:** Processing real-time pictures data flow.
- **Azure:** Using Azure API and integrate the services in our solutions.

## CLOUD COMPUTING

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- **AWS:** Ease into the services, VPC, load balancers, etc.
- **Docker:** Use of containers in some projects.
- **OpenStack:** Experience in using the infrastructure.
- **IAAS/SAAS/PAAS/XAAS:** Play with different platforms and services (AWS, Heroku, Firebase, etc.)

## LANGUAGES AND SOFTWARES

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- **Data analysis:** R, Python, Hive.
- **DBMS:** Oracle, MySql, Sql Server.
- **Development languages:** Python, R, Java, C/C++, PHP, HTML, CSS, SQL, MEAN stack, JavaScript, Laravel, Android, Swift, Linux bash, Matlab, ActionScript, Visual basic.
- **Machine learning:** Neural Networks, CNN, Deep Learning, Decision Tree, Random Forest, PCA, LDA, SVM, XGB, Ridge, Lasso, ElasticNet, KNN.
- **Web:** Django, MEAN stack, HTML, CSS, JavaScript, Ajax, PHP.
- **Web server:** Apache.
- **Modelization language:** UML.
- **Software:** Power Designer, RStudio, Visual studio, Android studio, Eclipse, XCode, SSDT, Adobe Photoshop, Fiddler, Cisco Packet Tracer, MS Office, Adobe Flash Professional, etc.

## CERTIFICATES

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- Big Data Developer Mastery Award (IBM)
- Udemy courses:
  - o The ultimate hands on hadoop: Tame your big data.
  - o Spark and Python for Big Data with PySpark.
  - o Deep Learning A-Z™: Hands-On Artificial Neural Networks.
  - o Complete Guide to TensorFlow for Deep Learning with Python.
- Data network principles (France Université Numérique)
- CCNA: 1-2-3-4
- English:
  - o DynEd International: B1 level
  - o TOEIC: 760
- Driving licence.

## Summary of professional experience and internships

### CMCC – LECCE – ITALY

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#### Data engineer

##### On-going

Create data stream layer

- o Collect data from external data providers into local supercomputer.
- o Deliver data products from local supercomputer to data delivery system.

Operational activities

- o Assist operative team with porting projects into production.
- o Contribute to improving SLA by integrating the data stream layer into a backup unit.

Create a blockchain data tracker

- o Implement a blockchain based solution to track data products download.
- o Keep a unique signature into metadata that guarantees data authenticity to customers.
- o A user can re-sell a product through the web interface.
- o Each signature is backed by Algorand blockchain.

Technologies (Python, Supercomputer, linux, blockchain)

### DRT – ARIANA – TUNISIA

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#### Data scientist

##### 6 months

##### Part time

Create Automatic Licence Plate Recognition project

- o Collect data of tunisian vehicles plate pictures.
- o Preprocess data, create ML process flow for recognition.
- o Connect ML model to backend and provide it as Api for prod and real-time cam.

Manage Voice recognition project.

- o Manage a team to create an auto subtitling project for tunisian parole.
- o Benchmark open source solutions.
- o Audio processing oriented ML.
- o Create POC.

Technologies (Python, Canny, ALPR, Voice recognition, CNN)

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## **CROCOCODER – ARIANA – TUNISIA**

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**Data science trainer**

**6 months**

### **Part time tutoring**

Practical training in the tutoring center and online

- o Theoretical and practical Data science teaching students of different backgrounds through several sessions in the training center.
- o Online live Machine learning tutoring on facebook. Ref below.
- o <https://www.facebook.com/watch/live/?v=704508070292681>  
<https://www.facebook.com/watch/live/?v=243436076775375>  
<https://www.facebook.com/watch/live/?v=2864851966897188>

Technologies (Tutoring, Machine learning, Theory, Practice)

## **THINGFARM AS – OSLO – NORWAY**

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**Data scientist**

**11 months**

### **Consulting**

Manage the data infrastructure, implement ETL.

- o Analyze in depth the existing database.
- o Optimize long taking queries and turn them into real-time responding.
- o Create an ETL to migrate historical data and the data flow in real time.

Improve existing solutions by developing new modules.

- o Create a flask web service that offers advanced functionalities for the IoT platform.
- o Create machine learning based functionalities.
- o Anomaly detection on large data.

Technologies (Python, MySQL, MongoDB, Flask, Regression algorithms, ETL, KPI)

## **GEEKS DATA CONSULTING – ARIANA – TUNISIA**

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**Data scientist**

**5 months**

### **Project 1: Manuscript cleanser**

Create a processing chain that cleanse the scanned image and determine manuscript fields:

- o Implement machine learning models that determine manuscript lines.
- o Construct mathematic functions and machine learning models that separate the writing from background (page color, spot, etc.).

Technologies (Python, OpenCV, SKlearn, Adobe photoshop, polynomial regression)

### **Project 2: Notice reader**

Create a manuscript reader for notices and bills:

- o Create a GUI to select input fields in a bill model.
- o Manual or automatic choose to determine thresholds of writing/background separation in the input fields.
- o Create a machine learning model to read manuscript digits and letters.
- o Create a methods to improve precision by using language rules.

The solution works on both PDF types: Image and/or Text.

The results are directly stored into a local database in order to be processed by NLP later.

Technologies (Python, Keras, OpenCV, CNN, SQL)

### **Project 3: Arabic comments radar**

Create an insults detector on Arabic comments:

- o Elaborate machine Learning models that classify comments (kind, offensive, etc.)
- o Combine models and select best chain and top significant features.

Technologies (Python, NLTK, Gensim, Textblob, Deep learning, auto ML, Glove, Word2Vec)

## **GEEKS DATA CONSULTING – ARIANA – TUNISIA**

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### **Graduation internship**

**6 months**

Create an oil and ethylene prices forecast chain from hybrid sources:

- o Implement an ETL that extracts data from different external sources, transform, and load it into a local database, then provide it -after merging with private data- as an API for the second entity.
- o The second entity consists of choosing the most significant features from all the present data, apply most precise machine learning module to predict prices, saves results locally for future analytics uses.
- o The third module is a business intelligence platform that takes most recent saved results and shows them for analysis team.

Technologies (Python, Django, BeautifulSoup, Fiddler, requests, R, RShiny, Regression models, SQL)

## **MEDIATRON LAB - SUP'COM – ARIANA – TUNISIA**

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### **Intern**

**2 months**

Conceive and create a single player and multi-player card video game.

Create an intelligent bot for solo mode gaming.

Implement algorithms for different use cases of the game.

Technologies (Python, Django, Actionscript, Flash, SQL, Bitmask)

## **PIXELS TRADE – ARIANA - TUNISIA**

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**Intern**

**2 months**

Create a face recognition based authentication:

- o Create a real time face detection module.
- o Train machine learning models on face images of customers identity cards.
- o Using Microsoft Azure services for benchmarking et solution improvement.

Technologies (Python, OpenCV, Haar cascade, Keras, CNN, SQL, Azure)

## **TUNI (STARTUP) – LE KRAM – TUNISIA**

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**Lead developer**

**9 months**

Manage a service sharing platform.

- o Improve the existing solution by integrating service recommendation algorithms based on graph theory.
- o Develop mobile and server side algorithms.

Technologies (PHP, Laravel, Android, Java, Dijkstra)

## **TUNISIE TELECOM – MONASTIR – TUNISIA**

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**Intern**

**1 month**

Administer network infrastructure.

Manage notices and make in-site operations.

Optical fibers installations in enterprises and routers configuration.

Technologies (GIS, Hyperterminal, Cisco)

## **SMART HOUSE PROJECT**

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**Freelance**

**2 months**

Create a smart house platform:

- o The solution is server based, allowing the user to connect as many machines (clients) to his account as he wants, remote-controlling them from his smart-phone.
- o Create statistic functions to show parameters (like lightning peak hours) as KPI.
- o Create a dashboard that shows overview of home on user friendly interface.

Technologies (PHP, Amcharts, SQL, Ajax, Javascript)

## **SERVICOM – CHARGUIA – TUNISIA**

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**Freelance**

**2 months**

Create a Business intelligence platform to follow sells' KPIs in real time.

Manage the enterprise's database to integrate our solution.

Technologies (PHP, Amcharts, Ajax, SQL)

### **Summary of realized projects**

## **STUDENT DATABASE MANAGEMENT**

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**Business intelligence academic project– SUP'COM**

**3 months**

Migrate the school database to another local one by applying transformations (ETL)

Implement KPIs representing different classrooms and students types.

Technologies (SQL Server Management Studio, SQL Server Data Tools, SSAS, SSRS, SSIS)

## **FOOTBALL MATCH PREDICTION**

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**Machine learning academic project – SUP'COM**

**4 months**

Predict match results of football premier league.

Create mining bots that extract data from external sources (statistics, history, bet, etc.).

Create machine learning models for prediction.

Technologies (Python, Django, XGB, logistic regression, random forest, requests)

## **MONIT: A MONITORING DASHBOARD**

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**Business intelligence academic project – SUP'COM**

**5 months**

Create a chain that collects data from different external sources, stores them into a data warehouse and shows KPIs on a dashbord.

The aim of this project is to offer a real-time overview on different environment variables of Gazela technopark: From surveillance camera video stream to different types of sensors, all in one dashboard with user friendly UX / UI.

Technologies (MEAN stack, data warehouse, Amcharts, KPI)

## **DECO'UP - DECORATING MOBILE APPLICATION**

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**Mobile development academic project – SUP'COM**

**4 months**

Create a mobile app that serves people who want to decorate their houses.

The app connects 3 actors:

- o Decorating product manufacturer/vendor.
- o Designer.
- o Customer.

The vendor publishes the products' articles, the user captures the areas to be decorated, the designer does the magic and sends images of how the place will look after buying product. The customer then can adopt the designer's choice and buy the used products.

Technologies (Python, Android, Java, PHP, SQL)

## **FANINC - FACEBOOK FAN NUMBER INCREASE**

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**My self project, made just for fun**

**1 months**

Create a tool that helps facebook page owners increase the fan number.

Users choose the type of pages they're interested in, the app joins them automatically.

It's a fan sharing app, users can get benefits from liking pages.

Technologies (Visual basic, PHP, SQL)

## **DEVELOP DIVERSE APPLICATIONS**

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**My self projects, made for fun**

**12 months**

To mention some:

- o Sudoku solver: Solves sudoku puzzles of all difficulty levels, detects if the puzzle is solvable or not. (Deployed on fb: <https://apps.facebook.com/sudokusolve/> )
- o Math curves representer: Given a math function and intervals. Mobile app (swf).
- o School schedule assistant: A mobile application (swf) that helps students know when, where and what courses they have. The app uses the phone's time and date to function. When it's break or vacancies, the app shows calm background.

Technologies (Actionscript, Flash, entrepreneurship)

## **ROBOT CONTROL**

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**High school robotic club project**

**2 months**

Create a software that remotely commands a robot from the laptop.

Participate in micro-controllers development.

Technologies (PIC C compiler, Visual basic, Sockets)



## Languages

Arabic: Mother language.

French: Professional.

English: Professional.

German: Beginner.

## Overview on technical skills

<b>Big Data</b>	Hadoop, MapReduce, Hbase, JAQL, Big SQL, Hive, Java, Spark, R, MongoDB, NoSQL, Big insight
<b>OS</b>	Linux, Windows, Mac OS, Android
<b>Programming Language</b>	Python, R, Java, C/C++, JavaScript, Android, Swift, Linux bash, Matlab, ActionScript, Visual basic
<b>Python libraries</b>	Sklearn, Keras, TensorFlow, Numpy, Matplotlib, Pandas, OpenCV, Pyspark, Tkinter, BeautifulSoup
<b>Machine learning algorithms</b>	NeuralNetwork, CNN, DeepLearning, Decision Tree, Random Forest, PCA, LDA, SVM, XGB, Ridge, Lasso, ElasticNet, KNN, Glove, Word2Vec...
<b>Cloud computing</b>	OpenStack, AWS, Docker, IAAS, PAAS, SAAS, XAAS
<b>Business intelligence</b>	SSDT, SSIS, SSAS, SSRS, KPI, ETL, Data warehouse
<b>Web / Web Servers</b>	MEAN stack, PHP, HTML, CSS, Laravel, Ajax, JS, Apache, Flask, Django
<b>Modalisation language</b>	UML
<b>Software</b>	Power Designer, RStudio, Visualstudio, Androidstudio, Eclipse, XCode, SSDT, Adobe Photoshop, Fiddler, Cisco PacketTracer, MSOffice, Adobe Flash Professional
<b>Networking</b>	Connaissances théoriques (modèles OSI...) et pratiques (technologies Cisco, sockets, TCP/IP, Routage)
<b>DBMS</b>	MySQL, Microsoft SQL Server, PostgreSQL, SQL, MongoDB

## Academic

**2018: ICT engineer graduation: Higher school of communications of Tunis.**

Major: Management of technology innovation.

Honors: Good.

**2015: Preparatory school: Preparatory institute for engineering studies of Monastir.**

Major: Physique-Technology.

Rank: 14/800

**2012: National baccalaureate diploma.**

Major: Technology.

Mark: 15.89/20