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SUMMARY

- Big Data Cloud support engineer II in Amazon Web Service, Ireland since May 2021
- PhD in Computer Science with dual expertise in industry and research. • Data Scientist with strong mathematical background and 6+ years' experience with predictive modeling, data analysis, supervised, unsupervised and deep learning algorithms.
- Programming experience with Python, Java, Android, Matlab...
- Self-taught on new technologies such as Tensorflow and YOLO.
- Eager to learn more about ML and Computer Vision conceptions in different fields.

WORK EXPERIENCE

May 2021-Present - Big Data Cloud support engineer II in Amazon Web Service, Ireland

Nov 2018 / Feb 2021 – Researcher | Freelancer | Reviewer

Various Conferences and Companies

- Developing new ML algorithms related to my thesis works.
- Writing scientific papers for publication in top-tiers international journals. • Coding ML and data science scripts using Python.
- Reviewing scientific papers in international conferences and journals.

Jan 2014 / Dec 2019 - PhD in Computer Science financed by the EU

TDS company & National School of Engineers Sfax -Tunisia

- Analyzing data and producing meaningful data visualizations.
 - **Python: Numpy | Pandas | Matplotlib | Scikit-learn | Seaborn | SciPy.** • Performing Statistical and Machine Learning techniques and providing the robust predictive modelling for traffic congestion.
 - **Neural Networks | MLP | Decision Trees | SVM | K-NN | K-means.** • Translating the system requirements to software programs taking into consideration analysis, design, construction and testing requirements.
- Comparing with the latest works in literature to get the best performance. • My publications along with the industrial reports articulate my research achievements and contemplate my writing and communication skills:

<https://scholar.google.com/citations?user=aPe3XyUAAAAJ&hl=fr&oi=ao>

Jan 2014 / Dec 2019 - Machine Learning R&D Engineer *TDS company*

- Applying Deep Learning techniques in face recognition for security purposes using Tensorflow framework.

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- Developing and Supervising of many projects based on Machine Learning and Computer Vision:
 - Autonomous Vehicles: car detection, road lane detection and estimation of the distance between obstacle and the car to avoid collisions and accidents.
 - Vehicle detection and speed estimation based on video processing techniques using YOLO algorithm.
- Working on the fastest path solution and improving the results by joining different AI and Optimization algorithms in one hybrid solution which increases GPS sales.

Sep 2013 / Jan 2019 - University Lecturer in the Department of Mathematics and BI

National School of Electronics and Telecommunications - Tunisia

- Teaching subjects for final level engineers: Java/JEE and Android.
- Mentoring of 11 end of study Computer Science internships including Computer Vision and Machine Learning projects.

Jun 2013 / Dec 2013 - Software Developer

ARTS company

- Contributing to the big project "Smart City" for the profit of the regional transport company of Sfax governorate, Tunisia.
- Developing an application to track buses equipped with GPS systems in real time to guide bus passengers.
- Carrying out an advertising Android application in an interactive Display Touch Screen for the profit of ARTS company.
 - *Android | Java | SQL | JavaScript | JSON*

Jan 2013 / Jun 2013 - End of Engineering Studies Internship

ARTS company & REGIM-LAB

- Building a custom Android and Linux Kernel for a tablet equipped with an RK3066 chip.
- Customizing an existing ROM with Reverse Engineering Method.

Feb 2012 - Summer Internship

Piva software

- Developing an Android game.

ACADEMIC QUALIFICATIONS

Dec 2019 – PhD in Computer Science

TDS company & National School of Engineers in Sfax -Tunisia

- First Class Honors Degree.
- PhD was carried out as an Industrial Thesis funded by the European Union.

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- Developing an intelligent decision support system to guide drivers in roads based on GPS system and Artificial Intelligence algorithms.

Jun 2013 - Computer Engineering Degree

National School of Engineers of Sfax - Tunisia

- First Class Honours.

Aug 2010 - Undergraduate Degree in Mathematics and Physics (MP)

Preparatory Engineer Institute of Sfax - Tunisia

- Second Class Honours.
- Success in the Tunisian Engineering Higher Schools Entrance Context.

June 2008 - Baccalaureate Diploma (Mathematics)

Majida Boulila Secondary School - Tunisia

- First Class Honours

DIGITAL SKILLS

- **AI programming algorithms and frameworks:** Neural Networks, Convolutional NN, Recurrent NN, Tensorflow, MLP, SVM, K-NN, Decision Tree, K-means... •
- **Programming languages:** Python, JAVA/J2EE, SQL, MySQL, Android, C, Javascript, PHP.
- **Markup languages:** XML, HTML, CSS.
- **Development environments:** Jupyter Notebook, OpenCV, Matlab, Eclipse, Android Studio.
- **Operating systems:** Linux Distributions, Windows OSs, Android.

COMMUNICATION SKILLS

- **English, French and Arabic** (fluently speaking, reading and writing)

CERTIFICATIONS

- Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning, ***Coursera, 2020.***
- Neural Networks and Deep Learning, ***Coursera, 2019.***
- MTA: Introduction to Programming Using Python, ***Microsoft, 2019.***

PUBLICATIONS

- Neural congestion prediction system for trip modelling in heterogeneous spatio temporal patterns (2020)

- Towards an efficient traffic congestion prediction method based on neural networks and big GPS data (2019)
- Intelligent Traffic Congestion Prediction System Based on ANN and Decision Tree Using Big (2017)
- Smart Drivers' Guidance System Based on IoT Technologies for Smart Cities Application (2016)

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- An investigation of parallel road map inference from big GPS traces data (2015) • Collection and exploration of GPS based vehicle traces database (2015) • Mining road map from big database of GPS data (2014)

ACTIVITIES

- Participation of NASA Space Apps Challenge Sfax 2018.
- Participation in the organization of the 4th and 5th IDSS workshop on the Internet of Medical Things 2018 and 2019.
- NCBI volunteer to help those who are living with sight loss to improve the level of independence and quality of life.

