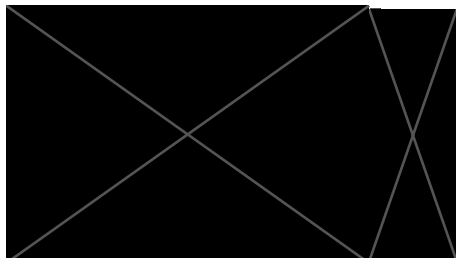**Data Scientist** My fields of interest in research include deep learning models for pattern recognition, optimization techniques analysis and development and efficient Deep Learning.

Dokkar Basma

Skill Highlights

- Self-learning
- Leadership
- Lucidity
- Multitasking
- Public speaking
- Self-Motivation

Languages

- Arabic (native)
- English (C1)
- French (C1)
- Spanish (B2)
- Japanese (jlpt5)

Awards

- Winner of Best CNN based architecture for ear recognition (class competition).
- Highest average of 2018 -2021 computer science class of UKMO.
- Highest average of 2021-2023 Artificial Intelligence and Data Science class of UKMO.
- Best Girl Scout Senior at the 'Leadership' camping summer 2016.

Experience

- Supply lab instructor of algorithms and data structures, statistics and mathematics for machine learning at the University of Kasdi Merbah Ouargla.
- College project on developing a change detection system for satellite images using CNN based deep learning architecture
- College project on developing a website for resident students' management.
- Freelance project on Vegetation Detection as a Data Scientist.
- Employee management system during internship at property development and management office.

Education

Masters: Artificial Intelligence & Data Science
Kasdi Merbah University, Ouargla (2021,2023)

Courses: Deep Learning – Machine Learning – Statistics for Data Scientists – Digital Imaging and Computer Vision – Natural Language Processing – Algebra – Calculus – Data exploration and visualization – Programming for Data Scientists – Machine Learning Applications
Thesis: First order Optimization Methods for Deep Learning
Bachelor: Computer Systems
Kasdi Merbah University, Ouargla(2018-2021)

Courses: Algorithms and data structures – software engineering – Operating Systems – Computer Architecture – Graph Theory – Language Theory – Linear optimization – Information Systems – Statistics – Mathematical logic – Numerical Methods – Artificial Intelligence – Networks – Algebra – Calculus – Digital logic – Data Bases - Semi Structured Data – Digital economy – Cybersecurity
Thesis: Optimization algorithms on UNet Deep Learning Architecture.

Publications

- A comparative study of the impact of different First Order Optimizers on The Learning Process of UNet for Change Detection Task , ISPR'2023 conference (lead author and speaker).
- Behaviors of First Order Optimizers in the context of sparse data and sparse models: A Comparative study June 2024 Digital Signal Processing journal.

Development skills

- Python (Numpy, Pytorch, Keras, Seaborn, Pandas) - C & Java - HTML & CSS - MySQL - JavaScipt - Git & github (beginner) - Latex

Personal Projects

- CNN based architecture for ear recognition.
- Deep Learning based system for covid-19 diagnostic.
- Auto encoders hello world project.
- SVD and LU decomposition from scratch.
- High dimensional variables PDF's and moments estimation from scratch.
- JPG compression from scratch
- DNA sequencing Hello world project
- Kidney tissue segmentation CNN based project
- Llama-2 based chatbot using RAG.

Certificates

- Deep Learning Fundamentals by NVIDIA.
- The Bawsala program, for career development promoting functional and soft skills by HSBC and World Learning.
- The financial literacy program on budgeting and financial decision making by HSBC and World Learning.
- Python for scientific computing, artificial intelligence and cybersecurity bootcamp by Saudi Aramco Cybersecurity Chair and King Fahd University of Petroleum and minerals.
- IELTS Academic (International English Language Testing System) with a 7.5/9 score (C1)