

Khouloud BEN CHEIKH

Biomedical Engineer
Machine Learning Developer

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Country Tunisia
Driving Licence B
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Portfolio LinkedIn . GitHub . ResearchGate . Medium . Behance
Competence areas Machine Learning, Data Science, Computer Vision, Deep Learning, Health AI, Python, Power BI, FullStack Development, Communication, Leadership

About

Khouloud is a dynamic individual driven by a passion for technology and health, committed to enhancing human well-being. Whether she's pioneering cutting-edge medical AI algorithms, analyzing and managing data, or creating IT content, she continually seeks fresh challenges and opportunities to innovate in the realms of science and technology.

Positions

- 07/2023 - Present **Machine Learning Developer - Project Manager at 3DWave, Tunisia,**
- Designed and implemented machine learning algorithms to enhance project functionality and effectiveness,
- Directed product development and strategic planning initiatives to ensure alignment with organizational goals and market demands. ,
Projects:
- Medical Chatbot for customer support in SAV,
- ML algorithm for Mobile application SShared Patient Records" predicting illnesses,
- Model predicting Blood Flow Rate for Artificial Heart project,
- VR games enhancing kinesitherapy experiences,
- Immersive VR scenarios for phobia treatment,
- UV lamp-based space sterilization device introduction.,
Skills: **AI Strategy . Leadership . VR/AR Technology**
- 09/2022 - 12/2023 **Machine Learning Researcher at Signal, Image, and Information Technology Research Laboratory (ENIT), Tunisia,**
- Development of an AI Model for Dental X-ray images with the capability to detect and identify illnesses associated with Dental Conditions.
- Development of a Multimodal Chest X-ray Image Captioning, enabling automated generation of descriptive and contextually reports. ,
Skills: **LLM GPT Prompt Engineering . CNN . RNN . Computer Vision**
- 08/2021 - 09/2022 **Data Scientist at Hospital District El Alia, Tunisia ,**
My tasks involve data management throughout the vaccination process. This encompasses supervising vaccine supply, collecting and analyzing patient data, and ensuring its security and protection. ,
Projects:
- Vaccination Management and Reporting Dashboard,
- COVID-19 Mortality Analysis Dashboard,
- Bed Availability Prediction Algorithm. ,
Skills: **Power BI , Looker Studio . SQL . Leadership . Organization**

Biomedical Engineer at Hospital District El Alia, Tunisia,

My responsibilities during the COVID-19 pandemic have included Maintaining Medical Equipment's, validating and analysing PCR analysis results, and Purchasing New Equipment to support the Response Effort. ,

Skills: Equipments repair . Troubleshooting . Working under pressure

05/2022 - 01/2023

Radio Host at Mandra FM, Bizerte, Tunisia,

As a Radio Host, my job involves researching and staying current with the Latest Technology Developments, where I present two weekly Tech-focused Podcasts:

Deep Tech: keeps listeners updated on the latest tech news and advancements,

Beb'Net: provides analysis and insights on the newest technological trends.,

Skills: Broadcasting . Community Development . Communication

01/2021 - 06/2021

Sales Manager at SAMSUNG HealthCare Tunisia,

Led Marketing Strategy development for US system sales, focusing on Market Analysis and targeted campaigns. Ensured optimal device performance, collaborating with technical teams and providing Customer Support.,

Skills: Marketing . Functional Training· Controller-ship Functions

04/2020 - 01/2021

Clinical Application Specialist at PHILIPS Imaging HealthCare Tunisia,

My role involves providing Hands-on Training and support to Healthcare professionals. I work closely with medical staff to ensure that they have a Deep Understanding of the Latest Medical Equipment and Technologies. ,

Skills: Maintenance and Repair . Technical Support . Customer Relationship Management (CRM)

Education

03/2024 - Present

MLOps — Machine Learning Operations Specialization

University: Duke University — Coursera

09/2022 - Present

Research Master in Statistics and Data Science

University: National Engineering School of Tunis

06/2022 - 12/2022

Full-Stack Web Development Training Program,

University: Kulimi e.V

09/2017 - 12/2019

Master Degree in Signal Processing

University: The Higher Institute of Medical Technologies of Tunis

09/2014 - 06/2017

Bachelor Degree in Biomedical Engineering (Field: Medical Imaging)

University: The Higher Institute of Medical Technologies of Tunis

Realisations and Projects

- **LLM-Blending:** Merge 3 Large Language Model related to Biomedical Field for enhanced Analysis,
- **Teeth GAN Model:** Leveraging Generative Neural Networks for Enhanced Tooth Segmentation and Recognition,
- **Neural Network Analysis:** Conducts in-depth Exploration of NN Architectures,
- **Cell Content Segmenting:** ML model optimized for precise Cell Segmentation, developed using Cellpose-2,
- **Bed Availability Prediction:** Utilizes real-time Data Analysis to forecast Hospital Bed demand during the Covid-19 pandemic, optimizing resource allocation,

- **AI Voice Assistant:** Develops a Conversational AI voice assistant providing users with a seamless interface for interacting with technology and accessing information,
- **Brain Tumor Classification:** Implements a CNN-based AI model to accurately detect and classify brain tumors from MRI images,
- **Autism Personal Assistant:** Utilizes AI to create a customized robot aiding Autistic Children in daily tasks and social interactions,
- **Octo-B - ICCHP2018 Conference, Austria:** Smart Toy for Visually Impaired Children to teach them the Braille system,
- **VR "Mini Golf":** Creates an immersive virtual reality mini-golf game tailored for children with Becker's deficiencies to improve motor skills and coordination,
- **Dia-Socks:** Designs Smart Socks equipped with Sensors for continuous monitoring of Diabetic patients' Foot Health,
- **Need for Smeed:** Develops a Mobile Application catering to Specific needs and requirements, enhancing user experiences and efficiency.
- **3D Printed Visors:** Utilizes 3D printing technology to produce protective Visors for frontline Medical Staff combating the Covid-19 pandemic, ensuring Safety and Comfort.

Social Life

- 2022 **Hult Prize Tunisia,**
Principal Judge
- 2022 **Tunisian National Reading Competition,**
Bizerte State Representative among 140k participants
- 2022 - Present **Calligraphia Club,**
External Relations Manager
- 2019 - Present **Tunisia e-Health Challenge,**
Main Organisation Committee
- 2018 - 2021 **BioMedical Innovation Club,**
Founder — President
- 2017 - 2019 **The Higher Institute of Medical Technologies of Tunis,**
University Ambassador

Languages and Programming Skills

- Languages** Arabic . French (DELF B2) . English . German
- Programming Skill** Python . Matlab . C/C++ . Assembly . VHDL . JavaScript

HOBBIES

Reading . Making Jewelry . Graphic Design . Calligraphy