Amal MEKNI

Third-year Engineering Student in Cloud Computing and Virtualization & Researcher in Data Science and Intelligent Services.

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PROFILE

Dynamic third-year engineering student in Cloud Computing and researcher in Data Science, specializing in predictive modeling and cloud infrastructures. Skilled in AWS, Azure, Docker, and Kubernetes, I aim to enhance system performance by combining cloud computing with data science. Currently seeking a final-year internship (PFE).

PROFESSIONAL EXPERIENCE

MLOps Engineer (Intern)
INVEEP
08/2024 – 10/2024 | Tunis, Tunisie
Real-Time YOLO: Parking Spot Counting and Driver Identification with GPS Tracking, CI/CD Automation, and Machine Learning Model Optimization

Researcher in Data Science and Intelligent Services
ISTIC
02/2024 – 10/2024 | Tunis, Tunisie
Evaluation of Multiple Machine Learning Algorithms for Gait Phase Classification.
Analysis of the Impact of Training and Scaling Methods on Accuracy.
Potential Applications in Rehabilitation and Medical Diagnostics.

Full Stack Developer (Intern)
Tunisian National Railway Company (SNCFT)
01/2022 – 05/2022 | Tunis, Tunisie
Design, Development, Front-end, Back-end, Collaboration, Testing, Documentation

Full Stack Developer (Intern)
Tunis Transport Company (Transtu)
06/2021 – 09/2021 | tunis, tunisie
Design, Development, Fleet Management, Collaboration, Business Requirements, Quality, Reliability, Unit Testing, Continuous Integration

LANGUAGES

Arabic	French	English
Native	C1	B2

CERTIFICATES

- Supervised Machine Learning: Regression and Classification (Coursera)
- Big Data Engineer Certificate

PROJECTS

ACADEMIC PROJECT
- **Kubernetes Autoscaling:** HPA, VPA, resource optimization
- **Kubernetes and Docker:** REST API, ReplicaSets, high availability
- **MinIO Cloud Storage:** Scalable storage, AWS S3 compatibility
- **AWS VPC with Terraform:** VPC, subnets, NAT gateways, Terraform
- **Identity Management:** Keycloak, user roles, permissions
- **Pod Volume Management:** Kubernetes, shared volumes, inter-container communication
- **Disease Prediction Platform:** Python, Flask, web scraping, disease prediction
- **ELK Stack:** Visualization, centralized logging, data storage

SKILLS

Programming Languages
JavaScript, Python, Java, C, C++, PHP

Databases
SQL, PL/SQL, MySQL, MongoDB, NoSQL

Plateformes
Amazon Web Services (AWS), Microsoft Azure

Frameworks and Libraries
React, Spring Boot, Bootstrap, FastAPI, Flutter, JEE, Django, Laravel, YOLO, TensorFlow, PyTorch, scikit-learn, Angular, NodeJS, ExpressJS

Technologies of Cloud and DevOps
- **DevOps Tools:** CI/CD, Docker, Kubernetes, Jenkins, Ansible, Terraform, Puppet, Git, GitHub, Jira
- **Networking and Security Tools:** Kali Linux, GNS3, Cisco Packet Tracer
- **Cloud and Virtualization Platforms:** Red Hat OpenStack, DevStack, CloudFront

EDUCATION

Engineering Degree in Computer Science: Cloud Computing and Virtualization
iTeam
2023 – present | Tunis, Tunisie

Master's Degree in Computer Science - Robotics and Communication Systems (RISC): Data Science and Smart Services
the Higher Institute of Information and Communication Technologies
2022 – 2024 | Tunis, Tunisie

Bachelor's Degree in Computer Science: Software Engineering and Information Systems
The Higher Institute of Information and Communication Technologies
2019 – 2022

ACADEMIC PUBLICATIONS

Journals
*Mult*Amal Mekni, Jyotindra Narayan, Hassen Gritli. "*Multi-Class Classification of Gait Cycle Phases Using Machine Learning: A Comprehensive Study of Two Training Methods*". **Medical Engineering & Physics**, 2024. (*Under review*)

Books
Amal Mekni, Jyotindra Narayan, Hassen Gritli. "*Multi-Class Classification of Gait Cycle Phases Using Machine Learning: A Comprehensive Study of Two Training Methods*". **Medical Engineering & Physics**, 2024. (*Under review*)

Conference Papers
-Amal Mekni, Jyotindra Narayan, Hassen Gritli. "*Leveraging Machine Learning for Gait Phase Classification with Varied Training Methods*". In *Proceedings of the 2024 IEEE 7th International Conference on Advanced Technologies, Signal and Image Processing* (**ATSIP**), Sousse, Tunisia, May 27–29, 2024, pp. 582–587.

-Amal Mekni, Jyotindra Narayan, Hassen Gritli. "*Binary and Ternary Human Gait Phase Classification Using Machine Learning Algorithms*". In *Proceedings of the 2024 International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies* (**3ICT 2024**), University of Bahrain, Bahrain, November 17–19, 2024. (*Accepted*)