

Fares Ben Slimane

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SUMMARY

AI Engineer with expertise in developing, optimizing, and maintaining MLOps pipelines to deliver fully functional AI products from conception to production. Proven experience across diverse fields, leveraging state-of-the-art AI technologies to create impactful solutions.

TECHNICAL SKILLS

Programming Languages: Python, C++, SQL, Javascript, Dart (Flutter)

Deep Learning Frameworks: TensorFlow, Keras, PyTorch (preferred)

Machine learning: Data analysis & visualization (Matplotlib, Plotly..etc), Supervised classification and regression ML algorithms, unsupervised ML algorithms, Statistics, Probability, Calculus and Linear algebra

MLOps & Cloud: Git, Docker, Kubernetes, AWS, Google Cloud Platform, Azure ML, MLflow, ClearML

Libraries & Tools: NumPy, Pandas, Scikit-learn, OpenCV, TensorRT, ONNX

Deep learning (Theoretical & Practical): Neural Networks & Convolutional neural networks (CNNs), Recurrent Networks (RNN, GRU and LSTM), Transformers (attention-based models), Generative Models (GAN, VAE), Reinforcement Learning (Q-learning, Monte Carlo, Sarsa, PPO..etc)

Mila Course (Prof. Aaron Courville) - Representation Learning (IFT 6135) Winter-2019, Grade: A-

Computer Vision: Image classification, segmentation, object detection, anomaly detection, Video and Image Analysis

Speech Recognition: Lightweight Wakeword Detection, Command detection, ASR, Speech-to-Text and Text-to-Speech

NLP: Text classification, Language modelling, Machine translation, LLMs

Soft Skills: Worked in high-paced startup environments, Led R&D ML projects, Team Player with efficient communication skills, Positive force and a good motivator, Effective in both spoken and written English and French

EXPERIENCE

[OpenClassroom] AI mentor October 2023 – Present
ML development, AI project Management *Remote*
• Mentor professional students on diverse AI topics including data analysis and visualization, regression, classification, clustering, and AI project Management.

Gap time Feb 2024 – Present
• Recently, I chose to spend more time with my family, whom I hadn't seen much due to COVID restrictions and long distance. However, I stayed productive by working on AI-related personal projects and doing AI-related mentorship sessions.

[Fluent.ai] Machine learning Developer June 2022 – Feb 2024
Speech Recognition, Wakeword Detection, MLOps *Montreal, Canada*
• Collaborated with data scientists and engineers to enhance data pipeline processes, including collection, cleaning, and preparation.
• Maintained the MLOps lifecycle of AI models by reliably and efficiently training, evaluating, logging, monitoring, deploying, and optimizing wakeword models in production.
• Actively participated in the porting and seamless integration of our models across diverse embedded DSP platforms, including HIFI 4/5 and Syntiant..etc
• Developed a wakeword architecture that reduced model size by 55% and floating-point operations by 16%, while maintaining strong performance in multi-wakeword scenarios, noisy environments, and diverse accents. Achieved a 7% False Rejection Rate (FRR) and 2-3 False Alarms per wakeword, setting a new market benchmark.

[Hummingbirds AI] Machine learning Developer December 2020 – May 2022
Segmentation, Multi-Camera Person tracking, Face identification, Anti spoofing *Remote*

- Implemented cutting-edge academic algorithms for object detection, segmentation, and tracking, ensuring the application of state-of-the-art techniques in Computer Vision.
- Engineered a personalized person-tracking system capable of handling occlusion challenges and diverse camera views.
- Orchestrated the deployment of an efficient biometrics system, achieving high accuracy and low latency for continuous face identification. Implemented robust anti-spoofing measures against 2D and 3D attacks, ensuring system security and reliability.
- Collaborating with clients by translating business needs into actionable technical requirements and ensuring the effective implementation of AI solutions.

[Ciena] R&D Computer Vision Developer

September 2019 – September 2020

Visual inspection, Anomaly Detection, Unsupervised Learning

Ottawa, Canada

- Devised a comprehensive automated visual inspection pipeline, proficiently detecting faults in PCB cards for streamlined quality control.
- Engineered precise component detection algorithms, optimizing the identification of diverse product components.
- Implemented unsupervised anomaly detection techniques for PCB cards, ensuring quality assurance and fault identification.

PROJECTS

Sign Language Recognition & Translation

2019

- Build a system that interprets a sequence of images, representing sign language, and generates a coherent textual translation in spoken language. Implemented advanced capabilities to effectively learn and extract essential spatio-temporal information from sign gestures, ensuring accurate and meaningful translations.

[Orange] R&D Machine Learning Developer

February 2017 – June 2017

Tunis, Tunisia

- Designed and constructed a prototype for an intelligent hydroponic farm for plants.
- Implemented an AI rule-based system to manage indoor settings autonomously.
- Employed Deep learning Computer vision models to identify plant anomalies and diseases based on leaf appearance.
- Established real-time control and monitoring of internal farm parameters through an intuitive web dashboard.

PUBLICATIONS AND TALKS

Conference Paper: ICPR

Accepted

Context Matters: Self-Attention for Sign Language Recognition

2020

REFEREES

Charles Gauvin

Fluent.ai

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VP Product & Engineering (OPS)

charles@duoemail.com

EDUCATION

University of Quebec at Montreal

M.S. in Computer Science (Artificial Intelligence) - GPA: 3.94

Montreal, Canada

Jan 2018 - Sep 2020

Higher institute of information and communication technologies (ISTIC)

'Licence' in Computer science

Tunis, Tunisia

Sep 2014 - Jun 2017

AWARDS

Scholarship of Excellence (UQAM)

Faculty of Science - MSc Computer Science

Montreal, Canada

2018 & 2019

Scholarship Mitacs Accelerate

Mitacs Accelerate Program

Montreal, Canada

2019-2020