Amal Feriani

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EDUCATION

University of Manitoba, Canada   2020 – 2021

- Master of Science in *Machine Learning* for *Wireless Communication*, GPA: 4.0/4.0
- Price Graduate Scholarship for Women in Engineering

Paris Dauphine University, France   2015 – 2016

- Master of Engineering in *Machine Learning*
- Top of the class, Graduated with distinction

Ecole Polytechnique de Tunisie, Tunisia   2011 – 2014

- Bachelor of Engineering in *Economics & Statistics*
- Graduated with highest honors

EXPERIENCE

Samsung AI Center   April 2022 – Present
Senior ML Engineer   *Montreal, Canada*

- Design and implement personalized autonomous agents for smart home automation using large language models (e.g,. personalized recommendations, autonomous routines, multi-modal grounding).
- Contribute to a knowledge-sharing platform to improve internal productivity using large language models (e.g., multi-modal retrieval, summarization, etc)
- Participate in device-free localization using UWB sensors
- Lead the data-driven digital twin project to bridge the gap between simulation and real-world
- Build and design the first open source benchmark for data-driven channel estimation

Samsung AI Center   May 2021 – December 2022
Graduate Research Intern   *Montreal, Canada*

- Design a multi-objective reinforcement learning algorithm for load balancing in 5G wireless communication systems
- Improve the multi-objective load balancing performance via meta-learning and policy distillation
- Investigate the robustness and the generalization of the proposed algorithm

InvisionAI   November 2018 – March 2020
Senior Computer Vision Engineer   *Toronto, Canada*

- Prototyped and optimized deep vision models for edge devices
- Experienced with various deep object detection models for security
- Implemented ML algorithms for a mobile vehicle occupancy detection system
- Participated in the development of the C++/Python training and deployment stacks

Netatmo   May 2017 – October 2018
Computer Vision Engineer   *Paris, France*

- Optimized CNNs for face recognition (50% inference time speedup on CPU-only cameras)
- Enhanced the face recognition performance by 6%
- Investigated the bias and fairness of the deployed vision models

IBM   October 2016 – May 2017
Data Scientist   *Paris, France*

- Participated in the design/deployment of a virtual assistant for a Telecom service provider
- Trained natural language classifiers to detect users' intents
- Achieved 90% accuracy on more than 50 intents

GERAD/HEC Montreal   February 2014 – June 2014
Research Intern   *Montreal, Canada*

- Modeled sustainable International Environmental Agreements using stochastic game theory
- Designed transfer schemes that support a cooperative emission reduction policy

TECHNICAL & LANGUAGE SKILLS

- Programming languages: Python and C++
- Deep Learning frameworks: TensorFlow (1.0/2.0), PyTorch
- Tools: SQL, Git, AWS
- Languages: Fluent in English (TOEFL: 105/120), French (TEF: C2) and Arabic; Familiar with Spanish

SCHOLARSHIPS & AWARDS

- Price Graduate Scholarship for Women in Engineering - $12,000 (2020)
- International Graduate Student Entrance Scholarship based on academic merit - $6,000 (2019)
- Laureate of the 7th GERAD Visiting Undergraduate Trainees Competition - $3,000 (2014)

SELECTD PUBLICATIONS

To a full list, please check my Google scholar.

- **A. Feriani**, D. Wu, Y.T. Xu, J. Li, S. Jang, E. Hossain, X. Liu, G. Dudek. Multiobjective load balancing for multiband downlink cellular networks: A meta-reinforcement learning approach. *IEEE JSAC 2021*. [Paper][Patent]
- **A. Feriani**, E. Hossain. Single and Multi-Agent Deep Reinforcement Learning for AI-Enabled Wireless Networks: A Tutorial. *IEEE COMST 2021*. [Paper]
- **A. Feriani**, A. Refaey, E. Hossain. Tracking Pandemics: a MEC-enabled IoT ecosystem with learning capability. *IEEE Internet of Things Magazine 2020*. [Paper]
- **A. Feriani***, I. Akrout*, M. Akrout. Hacking Google reCAPTCHA v3 using Reinforcement Learning. *RLDM 2019*. [Paper]

ADDITIONAL INFORMATION

- Programming mentor at Canada Learning Code (2019 – 2020)
- Student mentor at Springboard. Number of mentees: 15 (2019 – Present)
- Sports: Cycling, Muay Thai
- Interests: Traveling, Reading, Painting