# Hadjer Benmeziane

PhD Student @UPHF, CS Engineer

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### EDUCATION

Université Polytechnique des Hauts-de-France
PhD Computer Science, Advisors: Professor Smail Niar, Professor Hamza Ouaghnouni

Sept. 2020 - Current

Ecole Nationale Supérieure d'Informatique

Algiers, Algeria

Valenciennes, FR

Master of Science in Computer Science; Engineering Diploma in Computer Science

Sept. 2015 - July. 2020

Udacity

Remote

 $Udacity\ Deep\ learning\ with\ PyTorch\ Nanodegree\ Program$ 

Feb. 2019 - Apr. 2019

 $\mathbf{Udacity}$ 

Remote

 $Udacity\ Deep\ Reinforcement\ learning\ Nanodegree\ Program$ 

Aug. 2019 - Dec. 2019

# EXPERIENCE

Transactions on Computer-Aided Design of Integrated Circuits and Systems

Reviewer

 $HW ext{-}NAS$  articles specifically. PUBLONS Profile

Mar. 2021

IEEE Transactions on Systems, Man, and Cybernetics: Systems

Reviewer

HW-NAS articles specifically. PUBLONS Profile

Feb. 2021

Massachusetts Institute of Technology, CSAIL Team

Final Year Project - Research Intern Aug. 2019 - July. 2020

with Baqhdadi Riyadh

Optimizing PyTorch; a deep learning Framework, with Tiramisu;

a deep learning compiler.

Optimize XLNet with operator fusion and tiling operations.

Palantir Software Engineer

with Robert Fink

Sept. 2019

Contribute in Open Source Projects such as python-language-server

ML Course Assistant

with Pr. Benatchba Karima

Avr-May. 2019

Content Creator of the Machine Learning Course at Ecole Nationale Supérieure

d'Informatique, Algiers.

Create notebooks for the course and exercices.

Present the TDs and help the students understanding the code and the tools.

School of AI Algiers

Make AI knowledge more accessible to everyone

Founder Mar. 2019

A community of Algerian passionate that shares AI knowledge and creates projects.

Organize several workshops and sessions to explain several deep learning concepts.

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with Abdelouahab AMIRA, Security Division

Data Science Intern

June. 2018 - July. 2018

Malware Classification application using Deep Learning

#### Publications

CERIST

Hardware-aware Neural Architecture Search: Survey and Taxonomy

Apr 2021

IJCAI 2021 - https://www.ijcai.org/proceedings/2021/592

Accelerating Neural Architecture Search with Rank-Preserving Surrogate Models

Jul 2021

Best Student Paper Award - ArabWic 2021

A Comprehensive Survey on Hardware-aware Neural Architecture Search

Dec 2020

https://arxiv.org/abs/2101.09336

# PROJECTS

**Pytorch\_Tiramisu**: An open-source python package that optimizes PyTorch models by calling the appropriate deep learning operators in Tiramisu Compiler.

AI2E: AI Everywhere Everytime is a series of workshops in machine learning. I helped selecting the topics, creating the notebook template and reviewing the content. https://github.com/SchoolofAI-Algiers/AI2E-workshops

 $\textbf{Generate TV Scripts}: Using LSTMs. \ https://github.com/IHIaadj/generate-tv-script. \\$ 

Face Generation with GANs: https://github.com/IHIaadj/face-generation-gans

Bike Sharing Project: https://github.com/IHIaadj/bike-sharing-project

**GDG AR**: An application that displays different objects and Google Technologies logos when moving the camera around GDG Banners https://github.com/IHIaadj/AR\_Unity\_Vuforia

Unity Navigation with RL: Reinforcement Learning project 1 https://github.com/IHIaadj/drlnd-unity-navigation OpenAI Gym Taxi-v2 Solver: Reinforcement Learning project 2 https://github.com/IHIaadj/OpenAI-Gym-Taxi-v2

**DL\_Trending**: Data Visualizations of the trending tasks and frameworks for Deep learning by analysing Model Zoo implementations and Github contributions.

Malware Classifier: Malware Classifier is a Rest API made with Django that classifies apk files between legitimate and malware.

Tayssir Hajj: A social network built for pilgrims to better recommend an accompanist for elder people.

Epsilon: A lightweight Linux Distribution. Project made as part of a university homework.

#### SELECTED AWARDS

# WISC Scholarship Award Women in Service Computing Scholarship award. WTM Scholarship Selected among 20 tech women in Europe and Africa to be awarded the Anita Borg's Scholarship. Udacity Pytorch Side Project Winner On the category of Cyber Security with a Malware Classification Model created with CNNs Individual Tunisia AI Hackathon NLU Challenge 4th Best Model analysing a dataset of mixed languages French, Arabic and Arabic in Latin letters.

#### Programming Skills

Languages: Python, Javascript, C/C++ ML/DL Frameworks: Tensorflow, PyTorch, Scikit-Learn Web/Mobile Frameworks: Laravel, Flutter Technologies: GCP, AWS, CUDA, MPI, Unity

#### COMMUNICATIONS & TALKS

SOAI Reading Sessions (Each Friday) with School of AI Algiers	2020/2021
AI2E: AI Everyday Everywhere with School of AI Algiers	Apr. 2020 – June. 2020
Workshop: Machine Learning Study Jams with GDG Algiers	Oct. 2019
Talk: ML Pipelines with Tensorflow Extended At Devfest Algiers 2019	Oct. 2019
Workshop: Computer Vision & Deep Learning with School of AI Algiers	Sept. 2019

Talk: How to Start your AI Journey At International Women's Day Organized by WTM Algiers	Mar. 2019
Workshop: Deep Learning with PyTorch with Facebook Circle Algiers	May. 2019
Workshop: Neural Neworks with Scikit-learn At GDG Algiers School Event	Dec. 2018
Workshop: Neural Networks with School of AI Algiers	Nov. 2018
Workshop: Linear Regression and Naive Bayes with School of AI Algiers	Oct. 2018
Talk : Build a Machine Learning Intuition At Start Your AI Journey Event	Sept. 2018
Workshop: Linear Regression and Naive Bayes with School of AI Algiers	Oct. 2018

#### Volunteering Activities

#### Google Developers Group Algiers

Organizer

Since Sept. 2018

Former Manager Development Department Active member since September 2018.

Helping in organization and the manager of the development team.

- \* Developing Devfest Algiers 2018 Website : devfest-algiers-2018.devfest.com
- \* Member of the development team of the GDG Algiers Website : gdgalgiers.com
- \* Machine learning Mentor at the hackathon Devfest 2018
- \* Event Manager of GDG School 14-15/12/2018

#### Women Techmakers Algiers

Organizer

 $WTM\ Scholar\ \mathcal{C}\ WTM\ Ambassador$ 

Since Sept. 2018

As a WTM Ambassador, I help in my community guide more girls to discover the awesome projects they can build by working in the tech field.

# School of AI Algiers

Founder

Former Manager

Since Sept. 2019

Dean of a large community of AI passionate developers and curious people that teaches and learns more about AI.

- \* Organized multiple events.
- \* Increase the number of chapter of School of AI in Algeria
- \* Create a Youtube Channel to overcome the pandemic and continue learning while at home.