# **OMAR YOUNIS**

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#### **EDUCATION**

## Visiting Researcher, EPFL

January 2022 - June 2022

Work on improvements for PowerSGD (CUDA) with the supervision of professor Martin Jaggi.

## Master Degree in Artificial Intelligence (CS)

September 2020 - July 2022

Alma Mater Studiorum - University of Bologna, Italy

29.5/30

**Featured courses:** Python, Deep Learning, Machine Learning, Computer Vision, Natural Language Processing, Scala, Optimization, Reinforcement Learning, Complex Systems, AI in Industry.

**Projects:** SegNet for food segmentation (TensorFlow), discrete optimization for VLSI (MiniZinc, Z3Py), planning for NAO robot (Python), Set Covering Machine implementation (Python), POS tagging (PyTorch), fact checking with FEVER dataset (PyTorch).

#### Bachelor's Degree in Computer Engineering

September 2017 - September 2020

University of Brescia, Italy

107/110

**Projects:** online othello game with GUI, computer player, and encryption (Java). Domotic system (Java).

Awards: partial fees refund due to honours.

**Thesis:** GEM-balls (a classifier with error bounds) - implementation, evaluation, and study of variants.

## **EXTRACURRICULAR ACTIVITIES**

Online summer school in AI, Nankai University, China

June 2021 for 2 weeks

Main topics: Robotics, Computer Vision, AI for Medical Applications.

**Projects:** mobile app to search images in the gallery using pretrained MobileNetV3 + SSD (Flutter), product recognition on store shelves using SIFT (Python with OpenCV).

Summer school in Deep Learning, Neuromatch Academy

August 2021 for 3 weeks

Main topics: PyTorch, Reinforcement Learning, from Deep Learning foundations to cutting edge research topics like Continual Learning and Meta-Learning.

**Project:** Spiking Neural Network with Hebbian plasticity to cluster MNIST (Python with BindsNET).

#### Other courses

Stanford, C. Finn - Multi-Task and Meta-Learning DeepMind x UCL - Reinforcement Learning 2021 Andrew Ng's Machine Learning & DL specialization MIT – Statistical Learning Theory NYU – Deep Learning Spring 2021 NPTEL – Probability Foundations

## OTHER PROJECTS

OpenAI's Gym: contributor, manager and reviewer. I am the author of the new render API.

SciPy's cKDTree remove method implementation (C++); make remove operation  $\sim 100x$  faster.

Orologi24 is a marketplace for watches. I have made a Telegram bot (Java) used by more than 10k users and a cross-platform mobile app (Flutter, Dart).

CarTradePro is a marketplace for cars. I have made a Telegram bot (Java).

#### COMMUNITIES & LEADERSHIP

Lead and founder of a Google Developer Student Club with more than 100 students.

Selected Mentee at LeadTheFuture, a Forbes awarded organization with an acceptance rate <20%.

Member and announcer for AI Journal Club, a university club to study AI papers.

Italian Association for Machine Learning, active member in study groups.

Selected volunteer for NeurIPS 2021. Organizers honor my work as one of the best.

## **AWARDS**

25th out of about 600 participants at First Ascent Italy (Italy's Finest Computer Science students).