

Alberto Raimondi

Machine Learning Engineer

EXPERIENCE

Machine Learning Engineer

Helixa.ai

May 2021 - Current

Milan

Working on statistical models to predict user interests from social media interactions.

- Implemented a recommendation system for item-user matching using collaborative filtering (Implicit library, PyData stack).
- Worked with different linear and non-linear machine learning models to predict user preferences and behavior (XGboost, Scikit-Learn, SciPy).
- Ported legacy code to modern cloud infrastructure (AWS batch, MetaFlow, MLflow) reducing time to market of the final product.
- Optimized unsupervised clustering system to reduce runtime by 40% and improve performance (AWS step, AWS Lambda, cProfile, Apache Arrow/Parquet).

Machine Learning Consultant

Freelance

Since 2020

Sporadically collaborating with clients on interesting projects.

- Managed the deployment and fine-tuning of a pretrained UNet model for medical image segmentation on AWS. The resulting system now allows non tech savvy medical researchers to autonomously run experiments (PyTorch, AWS EC2).

Assistant Researcher

Università degli studi Milano - Bicocca (Imaging and Vision Laboratory)

Nov. 2019 - Mar. 2021

Milan

- Developed deep learning models for electromagnetic signal optimization.
- Modeled electromagnetic signals as images using convolutional neural networks (ResNet, DenseNet, UNet).
- Implemented a set of complex differentiable operations allowing the usage of loss functions on the complex domain (PyTorch).
- Optimized model performance for embedded hardware using pruning and distillation techniques (ONNX, TensorFlow Lite).

Research internship

Università degli studi Milano - Bicocca (Imaging and Vision Laboratory)

Jun. 2018 - Oct. 2018

Milan

- Implemented a multi-class image detection system using the darknet framework (YOLO V3).
- Developed a back-end system for a "Smart Mirror" IoT device with the aim of allowing data collection and analysis to help senior citizens assistance.
- Built a system for real time neural network inference on IoT devices using remote computing resources via a REST API endpoint (Flask, REST).

EDUCATION

Master's degree in Data Science, (Honors graduate)

Università degli studi Milano - Bicocca

2017 - 2019

Milan

Bachelor's degree in Finance, Banking and Financial intermediaries

Università degli studi Milano - Bicocca

2013 - 2017

Milan

SKILLS

Programming

Intermediate: Python, Pytorch, OpenCV, Bash, SQL, Git, L^AT_EX, GNU/Linux.

Basic: Javascript, MatLab, R, TensorFlow.

Other: Docker, AWS (Lambda, ECR, Batch, S3, Athena), Metaflow, MLflow.

Languages

Italian (Native), English (CEFR C2), Spanish (Basic)

PUBLICATIONS

- *AESA Adaptive Beamforming Using Deep Learning - IEEE Radar Conference (2020)*
S. Bianco, P. Napoletano, A. Raimondi, M. Feo, G. Petraglia, P. Vinetti
- *Come si “costruisce” l’artista musicale di successo? Chiedilo a Spotify - Infodata IlSole24Ore (2018)*
A. Raimondi, D. Meloni, S. Santamaria

OTHER ACHIEVEMENTS

Erasmus Traineeship Program
Universidad Autónoma de Madrid

Apr 2019 - Sep 2019
Madrid

Two times winner of private merit scholarship "Tronchetti Provera"
Fondazione S. Tronchetti Provera

2017 and 2019

Python programming Teaching Assistant
Università degli studi Milano - Bicocca

2019 - 2020
Milan

Hackathon winner, 1st Place
Il Sole 24 Ore, Quality of life hackaton

2019
Milan