



SUMMARY

Self-motivated, hard-working, 3+ years experienced machine learning researcher. Ph.D. fellow doing research at the intersection of machine learning and computer security because *with great power comes great responsibility*. Startups creator and full-stack developer, eager to map great ideas into products.

EDUCATION

PH.D. PROGRAM IN COMPUTER SCIENCE, UNIVERSITÀ DI PISA

2017-present

- Pursuing a Ph.D. with a focus on machine learning safety from both natural (e.g. missing data due to sensors failure) and adversarial (e.g. adversarial examples) input distribution shifts.

M.SC IN COMPUTER SCIENCE, UNIVERSITÀ DI PISA

2014-2017

- Graded with *honors*: 110/110 *cum laude*
- Thesis title: "Augmenting Recurrent Neural Networks Resiliency by Dropout".
- Relevant Exams: Machine Learning, Numerical Optimization, Statistics, Parallel Programming, Computer Security, Cryptography.

SELECTED PUBLICATIONS

- D. Bacciu, F. Crecchi, and D. Morelli, "DropIn: Making reservoir computing neural networks robust to missing inputs by dropout," in *Proceedings of the International Joint Conference on Neural Networks*, vol. 2017-May, 2017
- D. Bacciu and F. Crecchi, "Augmenting Recurrent Neural Networks Resilience by Dropout," *IEEE Transactions on Neural Networks and Learning Systems*, vol. 31, no. 1, 2020
- F. Crecchi, D. Bacciu, and B. Biggio, "Detecting adversarial examples through nonlinear dimensionality reduction," in *ESANN 2019 - Proceedings, 27th European Symposium on Artificial Neural Networks, Computational Intelligence and Machine Learning*, 2019

WORK EXPERIENCE

PLURIBUS ONE (INTERN.)

2018-Summer / Italy

TENSORFLOW / ANDROID DEVELOPER

Prototyped a ML-based Android antivirus that runs *on-device* performing static-analysis to identify malware.

Full stack development: from features engineering to ML model training and deployment of the app.

BIOBEATS LTD

2014-Summer / Italy

XAMARIN / IOS DEVELOPER.

Contributed to the development of a mobile *platform independent* sensor data acquisition framework.

SKILLS

PROGRAMMING LANGUAGES *Experienced:* Python | C *Familiar:* Objective-C | Javascript | Bash | Java

SOFTWARE DEVELOPMENT Programming Paradigms | GIT | CLI | Agile Methodology | DevOps Lifecycles

FRAMEWORKS & LIBRARIES PyTorch | Tensorflow | Numpy | Pandas | Scikit-learn | Scipy | Jupyter

LANGUAGES *Native:* Italian *Fluent:* English (written and spoken)

AWARDS

- Math Guru, 1st prize @ UPGRADE Hackaton (APPrendere)
- CARStomize, Top-10 Ideas of EIA @ European Innovation Academy 2016.