LORENZO SIMONE

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EDUCATION

BSc Computer Science - University of Bari *2015-2018*
Final grade: 110/110 cum laude
Thesis title: Software system for anemia estimation based on the Erythema Index (EI) of the palpebral conjunctiva

Unsupervised machine learning methodologies for non-invasive anemia risk stratification and prediction based on the Erythema Index (EI) of the palpebral conjunctiva.

MSc Artificial Intelligence - University of Pisa *2019-2022*
Final grade: 110/110 cum laude
Thesis title: Deep generative models for electrocardiography time series

The main objective of this research is to synthesize conditioned electrocardiogram (ECG) data agreeing with a standard of morphological plausibility. We proposed a semi-supervised generative adversarial approach (ECGAN) capable of conditioning the generative probability distribution with respect to: normal rhythm and premature ventricular contractions (PVCs).

EXPERIENCE

Teaching Assistant September 2021 – Now
University of Pisa *Pisa, Italy*

· Teaching assistant for the course of **Machine Learning** from the MSc in Artificial Intelligence.

Teaching Assistant September 2020 – February 2021
University of Pisa *Pisa, Italy*

· Teaching assistant for the course of **Algorithms and Lab-1** of the BSc in Computer Science, helping students keeping up with lecture contents and exam preparation

Software Engineer September 2018 – August 2019
Auriga *Bari, Italy*

· Prototyping and developing the architecture of a key role software product managing customer interaction with bank branches. Handling asynchronous events with WebSockets and microservices infrastructures mainly developed in React Native and Typescript. Development of a management system handling HW peripherals.

PUBLICATIONS

[**1**] Dimauro, G., & Simone, L. (2020). Novel biased normalized cuts approach for the automatic segmentation of the conjunctiva. Electronics, 9(6), 997.
[**2**] Kasiviswanathan, S., Bai Vijayan, T., Simone, L., & Dimauro, G. (2020). Semantic Segmentation of Conjunctiva Region for Non-Invasive Anemia Detection Applications. Electronics, 9(8), 1309.
[**3**] Dimauro, G., Deperte, F., Maglietta, R., Bove, M., La Gioia, F., Renò, V., ... & Gelardi, M. (2020). A Novel Approach for Biofilm Detection Based on a Convolutional Neural Network. Electronics, 881.
[**4**] Dimauro, G., Di Pierro, D., Deperte, F., Simone, L., & Fina, P. R. (2020). A smartphone-based cell segmentation to support nasal cytology. Applied Sciences, 10(13), 4567.

SEMINARS

Novel biased normalized cuts approach for the automatic segmentation of the conjunctiva March 2021
Cooperative systems lecture - Bsc Computer Science *University of Bari*

· Guest lecture for the course of Multimedia System from the BSc in Computer Science

Basis pursuit ℓ_1 minimization and its biomedical applications March 2021
Cooperative systems lecture - Bsc Computer Science *University of Bari*

· Guest lecture for the course of Multimedia System from the BSc in Computer Science

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Date

Signature