PIERO
POLICASTRO

CONTACT INFO

E-mail	piero.polito@polito.it
Phone Nr	+39 3319832458
Address	Via Claudio Beaumont, 38, Torino, Italy
LinkedIn	linkedin.com/in/piero-policastro/

ABOUT ME

Piero Policastro is currently a doctoral candidate in electrical, electronic and communications engineering. He enrolled at the Polytechnic University of Turin to pursue a master's degree in e-health and medical informatics. During his academic journey, he acquired skills in MATLAB and the Python programming language. In particular, he has worked in the areas of signal analysis, artificial intelligence and image processing. In 2022, together with his team, he founded Viper.srl, a start-up company that develops algorithms for solving medical problems, particularly for the analysis of ultrasound images of the inferior vena cava.

EXPERIENCE

INTERNSHIP CLINICA FORNACA   Oct. 2017 - Mar. 2018
Private hospital | *Turin, Italy*

PART TIME UNIVERISTY COLLABORATOR   Oct. 2019 - Mar. 2020
Polytechnic University of Turin | *Turin, Italy*
Assistent of the Clinical informatics and Neuro-engineering courses.

RESEARCHER FELLOW, PROJECT VIPER   Jul. 2020 - Oct. 2022
Polytechnic University of Turin | *Turin, Italy*
Analysis of venous pulsatility using ultrasound imaging.

CHIEF TECNOLOGY OFFICER   Jun. 2022 - Present
Viper srl | *Turin, Italy*
Viper is a start-up company developing a software solution to help clinicians analyse the fluid status of patients using ultrasound imaging.

REASECHER   Oct. 2023 - Dic. 2023
CHUV university hospital | *Lausanne, Switzerland*
Conducted research on the correlation between ECG and respiratory signals in different phases of sleep.

EDUCATION

Bachelor's degree in Biomedical Engineering   2014 - 2018
Polytechnic University of Turin | *Turin, Italy*

MSc Biomedical Engineering E-Health   2018 - 2020
Polytechnic University of Turin | *Turin, Italy*
The aim of this thesis was to create a framework for classifying histopathological images and performing data cleaning using a Bayesian Neural Network deep learning model. Two applications were then developed based on this framework: one for detailed analysis and the other for efficient data cleaning.
Graduated with *summa cum laude*

Phd in Electrical, Electronics and Communications Engineering   2023 - Present
Polytechnic University of Turin | *Turin, Italy*

PUBLICATIONS

Articles

Ermini, L., S. Seddone, P. Policastro, L. Mesin, P. Pasquero, and S. Roatta (Dec. 2021). "The Cardiac Caval Index: Improving Noninvasive Assessment of Cardiac Preload". In: *Journal of Ultrasound in Medicine* 41.9, pp. 2247–2258. ISSN: 1550-9613. DOI: 10.1002/jum.15909. URL: http://dx.doi.org/10.1002/jum.15909.

Mesin, L., S. Albani, P. Policastro, P. Pasquero, M. Porta, C. Melchiorri, G. Leonardi, C. Albera, P. Scacciatella, P. Pellicori, D. Stolfo, A. Grillo, B. Fabris, R. Bini, A. Giannoni, A. Pepe, L. Ermini, S. Seddone, G. Sinagra, F. Antonini-Canterin, and S. Roatta (Jan. 2022a). "Assessment of Phasic Changes of Vascular Size by Automated Edge Tracking-State of the Art and Clinical Perspectives". In: *Frontiers in Cardiovascular Medicine* 8. DOI: 10.3389/fcvm.2021.775635. URL: https://doi.org/10.3389%2Ffcvm.2021.775635.

Mesin, L., L. Floris, P. Policastro, S. Albani, P. Scacciatella, N. Pugliese, S. Masi, A. Grillo, B. Fabris, and F. Antonini-Canterin (June 2022b). "Estimation of Aortic Stiffness with Bramwell–Hill Equation: A Comparative Analysis with Carotid–Femoral Pulse Wave Velocity". In: *Bioengineering* 9.7, p. 265. DOI: 10.3390/bioengineering9070265. URL: https://doi.org/10.3390%2Fbioengineering9070265.

Mesin, L., P. Policastro, S. Albani, C. Petersen, P. Sciarrone, C. Taddei, and A. Giannoni (June 2022c). "Non-Invasive Estimation of Right Atrial Pressure Using a Semi-Automated Echocardiographic Tool for Inferior Vena Cava Edge-Tracking". In: *Journal of Clinical Medicine* 11.12, p. 3257. ISSN: 2077-0383. DOI: 10.3390/jcm11123257. URL: http://dx.doi.org/10.3390/jcm11123257.

Policastro, P., G. Chiarion, F. Ponzio, L. Ermini, S. Civera, S. Albani, G. Musumeci, S. Roatta, and L. Mesin (Apr. 2023). "Detection of Inferior Vena Cava in Ultrasound Scans through a Deep Learning Model". In: *Electronics* 12.7, p. 1725. ISSN: 2079-9292. DOI: 10.3390/electronics12071725. URL: http://dx.doi.org/10.3390/electronics12071725.

Policastro, P. and L. Mesin (Sept. 2023). "Processing Ultrasound Scans of the Inferior Vena Cava: Techniques and Applications". In: *Bioengineering* 10.9, p. 1076. ISSN: 2306-5354. DOI: 10.3390/bioengineering10091076. URL: http://dx.doi.org/10.3390/bioengineering10091076.

Seddone, S., L. Ermini, P. Policastro, L. Mesin, and S. Roatta (Feb. 2022). "Evidence that large vessels do affect near infrared spectroscopy". In: *Scientific Reports* 12.1. DOI: 10.1038/s41598-022-05863-y. URL: https://doi.org/10.1038%2Fs41598-022-05863-y.

Seddone, S., L. Ermini, P. Policastro, R. Pertusio, L. Mesin, and S. Roatta (May 2021). "Do Large Vessels Affect Hemodynamic Monitoring by Near Infrared Spectroscopy?" In: *The FASEB Journal* 35.S1. DOI: 10.1096/fasebj.2021.35.s1.01913. URL: https://doi.org/10.1096%2Ffasebj.2021.35.s1.01913.

SKILLS

● ● ●   Python, Matlab

● ● ●   Tensorflow, Pythorch

● ● ●   IoT applications, Rest API, MQTT

● ● ○   Htlm, css, Javascript

Languages
- Italian
- English