Nunzio Alexandro Letizia

Curriculum Vitae

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in *nunzio-alexandro-letizia*
Nunzio A. Letizia

Profile

Co-founder and CTO of PiktID, building GenAI-based solutions for automatic image editing at scale. Researcher-turned-founder with a PhD in Communications Engineering and publications at NeurIPS and in IEEE Transactions. Combining deep expertise in machine learning with hands-on full-stack engineering and product development.

Work Experience

July 2022 – Present **PiktID FlexCo**, *Co-founder and Chief Technology Officer*.
Architecting and building from scratch the full GenAI stack powering AI-driven image editing platforms focused on **human identities**.
- **On-Model** – SaaS for fashion e-commerce designed for high-volume image processing with API integration, trusted by 50+ fashion brands
- **Studio** – comprehensive image editing platform featuring identity anonymization, facial expression editing, face swap, full-body and background generation, and image upscaling, serving **300K+** users

Dec. 2018 - Dec. 2022 **University of Klagenfurt**, *Teaching Assistant and Research Project Participant*.
Designed and taught university courses while contributing to EU-funded research projects.
- **Teaching:** Machine Learning for Information and Communication Engineering, Signal Processing for Communications, Digital Signal Processing, Communications Engineering
- **Projects:** Assessment of G3-PLC technology improvements, ERASMUS+ KA NEON, ERASMUS+ KA BENEFIT

Visiting

Dec. 2022 - Jan. 2023 **Princeton University**, *Visiting Researcher*, Princeton.
Work on deep learning-based algorithm for channel capacity estimation, supervision of Prof. H.Vincent Poor, department of electrical engineering

March - July 2018 **Emory University**, *Master Degree Thesis Research*, Atlanta.
Work on Compressive Sensing of cardiac data and detection of systolic peaks in a PPG signal, supervision of Prof. Gari Clifford, department of biomedical informatics

Volunteering

August 2024 - Present **Lead The Future**, *Mentor*.
Mentor of multiple high-achieving STEM Italian students and professionals in a non-profit organization focused on *Give Back*

May 2025 - May 2026 **NeurIPS**, *Reviewer*.
Peer reviewer for the *Advances in Neural Information Processing Systems* conference

2013 - 2018 **Mathematics Olympic Preparation Courses**, *Teacher*.
Topics covered: Calculus, Algebra and Number Theory

Education

Mar. 2019 - Oct. 2024 **PhD in Communications Engineering**, *University of Klagenfurt*, Institute for Networked and Embedded Systems.
Thesis : **"Deep Learning Models for Physical Layer Communications"**
Supervisors: Prof. Andrea M. Tonello and Prof. Bernhard Rinner

Oct. 2016 - Oct. 2018 **Master's Degree in Electronics Engineering**, *Università degli Studi di Udine*, Curriculum Telecommunications.
Final Mark: $110/110$ cum Laude
Thesis : "Compressive Sensing of Cardiac Data"
Supervisors: Prof. Gari D. Clifford, Prof. Roberto Rinaldo and Dr. Giulia Da Poian

Oct. 2013 - July 2016 **Bachelor's Degree in Electronics Engineering**, *Università degli Studi di Udine*.
Final Mark: $110/110$ cum Laude
Thesis : "Acquisizione di segnali con tecniche di Compressive Sensing"
Supervisors: Prof. Roberto Rinaldo and Dr. Giulia Da Poian

Sept. 2013 - Oct. 2018 **School for Advanced Studies**, *Università degli Studi di Udine*.
5 years full scholarship of excellence, high-level educational path

Selected Publications

[1] **Nunzio A. Letizia,** Nicola Novello and Andrea M. Tonello, "Mutual Information Estimation via f-Divergence and Data Derangements," *Advances in Neural Information Processing Systems*, Vancouver, pp. 105114-105150, Dec. 2024.

[2] **Nunzio A. Letizia,** Andrea M. Tonello and H.Vincent Poor, "Cooperative Channel Capacity Learning," *IEEE Communications Letters*, vol. 27, no. 8, pp. 1984-1988, Aug. 2023.

[3] **Nunzio A. Letizia** and Andrea M. Tonello, "Segmented Generative Networks: Data Generation in the Uniform Probability Space," *IEEE Transactions on Neural Networks and Learning Systems*, vol. 33, no. 3, pp. 1338-1347, March 2022.

[4] **Nunzio A. Letizia,** Babak Salamat and Andrea M. Tonello, "A Novel Recursive Smooth Trajectory Generation Method for Unmanned Vehicles," *IEEE Transactions on Robotics*, vol. 37, no. 5, pp. 1792-1805, Oct. 2021.

[5] **Nunzio A. Letizia** and Andrea M. Tonello, "Capacity-Driven Autoencoders for Communications," *IEEE Open Journal of the Communications Society*, vol. 2, pp. 1366-1378, June 2021.

Fellowships and Awards

November 2025 Best Dissertation Award, *Faculty of Technical Sciences*.

October 2021 Best Paper Award, *IEEE ISPLC 2021*.

July 2016 Best Graduated Student of the Electronics Engineering Curriculum.

December 2014 Marinella Panozzo Scholarship, *Best Freshman in Electronics Engineering Degree*.

Sept. 2013 - Oct. 2018 Scholarship of Excellence, *Scuola Superiore dell'Università degli Studi di Udine*.

May 2013 Italian Mathematics Olympics Finalist, *Bronze Medal*.

Skills and Competences

AI/ML Python, PyTorch, TensorFlow, ComfyUI; fine-tuning and large-scale deployment of open-source image generation models (Stable Diffusion, Flux, Wan, Qwen); containerized model serving.

Infra, Coding Git, Docker, AWS, GCP, Azure, Cursor, Claude Code.

Theoretical Expertise Advanced math and statistics, machine learning, deep learning, generative models, signal processing, communication theory, information theory, computer vision.

Languages Italian (native), English (fluent), Spanish (fluent), German (A2).

September 14, 2026