Lorenzo Agnolucci

PhD Student

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Education

2021 -
Nov, 2024
PhD in Computer Vision and Artificial Intelligence, *University of Florence*, Florence, Italy
Topics: Low-level Vision; Image Quality Assessment; Vision and Language; Video Restoration.

2019 - 2021
M.Sc in Computer Science and Engineering, *University of Florence*, Florence, Italy, Grade: 110/110 cum laude
Thesis: Deep Learning Techniques for Improving Video Visual Quality Using Keyframes

2016 - 2019
B.Sc in Computer Science and Engineering, *University of Florence*, Florence, Italy, Grade: 110/110 cum laude
Thesis: Localization of Figures in Scientific Articles

Work Experience

Mar, 2024 -
Nov, 2024
Research Intern, *SonyAI*, Tokyo
Conducted research on image quality assessment and low-level vision

Publications

2024 V. Hosu, L. Agnolucci, O. Wiedemann, D. Iso. UHD-IQA Benchmark Database: Pushing the Boundaries of Blind Photo Quality Assessment. *Arxiv* **(Under review)**.

2024 L. Agnolucci*, A. Baldrati*, M. Bertini, A. Del Bimbo. iSEARLE: Improving Textual Inversion for Zero-Shot Composed Image Retrieval. *Arxiv* **(Under review)**.

2024 L. Agnolucci, L. Galteri, M. Bertini. Quality-Aware Image-Text Alignment for Real-World Image Quality Assessment. *Arxiv* **(Under review)**.

2024 L. Agnolucci, L. Galteri, M. Bertini, A. Del Bimbo. ARNIQA: Learning Distortion Manifold for Image Quality Assessment. *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision* **(WACV Oral)**.

2024 L. Agnolucci, L. Galteri, M. Bertini, A. Del Bimbo. Reference-based Restoration of Digitized Analog Videotapes. *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision* **(WACV)**.

2023 A. Baldrati*, L. Agnolucci*, M. Bertini, A. Del Bimbo. Zero-Shot Composed Image Retrieval with Textual Inversion. *International Conference on Computer Vision* **(ICCV)**.

2023 L. Agnolucci*, A. Baldrati*, F. Todino, F. Becattini, M. Bertini, A. Del Bimbo. ECO: Ensembling Context Optimization for Vision-Language Models. *International Conference on Computer Vision Workshop* **(ICCVW)**.

2023 G. Burbi, A. Baldrati, L. Agnolucci, M. Bertini, A. Del Bimbo. Mapping Memes to Words for Multimodal Hateful Meme Classification. *International Conference on Computer Vision Workshop* **(ICCVW)**.

2023 L. Agnolucci, L. Galteri, M. Bertini, A. Del Bimbo. Perceptual Quality Improvement in Videoconferencing using Keyframes-based GAN. *IEEE Transactions on Multimedia* **(TMM)**.

2023 L. Agnolucci*, A. Baldrati*, M. Bertini, A. Del Bimbo. Zero-Shot Image Retrieval with Human Feedback. *Proceedings of the 31st ACM International Conference on Multimedia (**ACM MM Demo**)*.

2022 L. Agnolucci, L. Galteri, M. Bertini, A. Del Bimbo. Restoration of Analog Videos Using Swin-UNet. *Proceedings of the 30th ACM International Conference on Multimedia (**ACM MM Demo**)*.

* Equal contribution.

Academic Service

2024 **UHD-IQA Challenge**, *Advances in Image Manipulation Workshop*, ECCV 2024
I co-organized the UHD-IQA challenge, held in conjunction with the AIM 2024 workshop at ECCV 2024. The goal was to develop efficient image quality assessment models for high-resolution images. Challenge website: `https://codalab.lisn.upsaclay.fr/competitions/19335`

Technical Skills

Frameworks and Tools: PyTorch, NumPy, OpenCV, scikit-learn, pandas, Matplotlib
Programming Languages: Python, Java, Javascript
Miscellaneous: Git, Docker, bash

Languages

Italian, Native language
English, Full professional proficiency

Achievements

2021 **First Ascent 2021**, *Bending Spoons*, Milan
I was selected by Bending Spoons, one of the world's leading mobile developers by the number of app downloads, to participate in First Ascent, a 3 days event organized in Milan in order to celebrate Italy's top Computer Science students. I was selected among the 20 best students out of more than 500 applicants. Event page: `http://firstascent.io`

(Last updated: July 2024)