

# FABIO QUATTRINI

PhD Student @ AImageLab, Modena (MO), Italy

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## RESEARCH INTERESTS

PhD student at [AImageLab](#), supervised by [Prof. Rita Cucchiara](#) and [Dr. Silvia Cascianelli](#) and working on *Computer Vision for Cultural and Historical Multimodal Sources*. Main interest in Vision-Language models, Generative and Document AI.

## EDUCATION

<b>Ph.D. student in Information and Communication Technologies (ICT)</b> <a href="#">AImageLab, University of Modena and Reggio Emilia</a> Supervisors: <a href="#">Prof. Rita Cucchiara</a> , <a href="#">Dr. Silvia Cascianelli</a> .	01/2023 - 03/2026 Modena, Italy
<b>Master's degree in Computer Engineering   Artificial Intelligence Engineering</b> <a href="#">University of Modena and Reggio Emilia</a> Grade: 110/110 cum laude. Thesis: Introducing Vision Transformers in DDPMs. <a href="#">[paper]</a>	10/2019 - 12/2022 Modena, Italy
<b>Bachelor's degree in Computer Engineering</b> <a href="#">University of Modena and Reggio Emilia</a>	09/2016 - 10/2019 Modena, Italy

## WORK EXPERIENCE

<b>Applied Scientist Intern</b> CVNA, <a href="#">Amazon</a> <ul style="list-style-type: none"><li>Research on Foundation GenAI models to improve Visual Understanding and Generation in Images with Text.</li><li>Managed project planning. Supervised data collection and annotation team.</li></ul>	September 2024 - March 2025 Berlin, Germany
<b>Research Intern</b> <a href="#">AImageLab, University of Modena and Reggio Emilia</a> <ul style="list-style-type: none"><li>Built NLP and novel Generative Vision Transformers. Trained Denoising Diffusion Probabilistic Models (DDPMs) with distributed computing, achieving competitive Fréchet Inception Distance (FID) scores.</li></ul>	November 2021 - December 2022 Modena, Italy
<b>Technical Assistant Intern</b> <a href="#">Corepixmap s.r.l.</a> <ul style="list-style-type: none"><li>Configured client systems, built product demos and interactive technology solutions for digital signage.</li></ul>	Summers 2014 - 2015 Modena, Italy

## SELECTED PUBLICATIONS

**Zero-Shot Styled Text Image Generation, but Make It Autoregressive.** Vittorio Pippi\*, [Fabio Quattrini\\*](#), Silvia Cascianelli, Alessio Tonioni, Rita Cucchiara. CVPR 2024. [\[paper\]](#) [\[code\]](#)

**Alfie: Democratising RGBA Image Generation With No \$\$\$.** [Fabio Quattrini](#), Vittorio Pippi, Silvia Cascianelli, Rita Cucchiara. "AI for Visual Arts Workshop" ECCV 2024 (Oral Spotlight, Top-4). [\[paper\]](#) [\[code\]](#)

**Merging and Splitting Diffusion Paths for Semantically Coherent Panoramas.** [Fabio Quattrini](#), Vittorio Pippi, Silvia Cascianelli, Rita Cucchiara. ECCV 2024. [\[paper\]](#) [\[code\]](#)

**μgat: Improving Single-Page Document Parsing by Providing Multi-Page Context.** [Fabio Quattrini\\*](#), Carmine Zaccagnino\*, Silvia Cascianelli, Rita Cucchiara. "AI for Digital Humanities Workshop" ECCV 2024. [\[paper\]](#) [\[code\]](#)

**Binarizing Documents by Leveraging both Space and Frequency.** [Fabio Quattrini](#), Vittorio Pippi, Silvia Cascianelli, Rita Cucchiara. ICDAR 2024 (Oral). [\[paper\]](#) [\[code\]](#)

**HWD: A Novel Evaluation Score for Styled Handwritten Text Generation.** Vittorio Pippi, [Fabio Quattrini](#), Silvia Cascianelli, Rita Cucchiara. BMVC 2023. [\[paper\]](#) [\[code\]](#)

**Volumetric Fast Fourier Convolution for Detecting Ink on the Carbonized Herculaneum Papyri.** [Fabio Quattrini](#), Vittorio Pippi, Silvia Cascianelli, Rita Cucchiara. "4th ICCV Workshop on e-Heritage", ICCV 2023. [\[paper\]](#) [\[code\]](#)

**Segmentation-based Low-Resource Text Line Recognition.** Carlos Garrido Munoz, [Fabio Quattrini](#), Carmine Zaccagnino, Silvia Cascianelli, Costanza Bianchi, Jorge Calvo-Zaragoza, Rita Cucchiara. Under Review.

## CERTIFICATIONS

<b>International Computer Vision Summer School - ICVSS2024</b>	07/2024
<b>ELLIS Summer School</b>   Large-Scale AI for Research and Industry	09/2023
Best project award. <b>ClearView</b> : Camera Pose Refinement for Improved Radiance Fields	Modena, Italy
<b>International Summer School on Machine Vision - VISMACH23</b>	09/2023
<b>Kaggle Vesuvius Challenge - Ink Detection</b>   Silver Medal	06/2023

## KNOWLEDGE AND COMPUTER SKILLS

**Programming:** Python (Proficiency), Java, C, SQL | PyTorch, NumPy, OpenCV, Pandas, PyRobot, Scikit, Huggingface

**Miscellaneous:** AWS (EC2, SageMaker, Rekognition), Slurm, WandB, English (Fluent)