

Emanuele Vivoli

PhD student at [MICC](#)¹ and [CVC](#)²

¹ Viale Morgagni 65, 50134, Florence, Italy

² Edifici O, Campus UAB, 08193, Barcelona, Spain

github.com/emanuelevivoli - emanuele.vivoli@unifi.it

PRINCIPAL INTERESTS

PhD topics: I work in the frontier between Vision and Language: Comics
Other research topics: I have worked on Multi-sensory data, Ground penetration radar, demining robots & Handwriting Recognition & Table Recognition.

ARTICLES

See also [my Google Scholar](#) page.

9. **Emanuele Vivoli**, A. Barsky, M.A. Souibgui, A. Llabrés, M. Bertini, D. karatzas, “One missing piece in Vision and Language: A Survey on Comics Understanding”, under review, 2024, [paper](#)
8. **Emanuele Vivoli**, N. Biondi, M. Bertini, D. Karatzas, “ComiCap: A VLMs pipeline for dense captioning of Comic Panels”, **ECCV W**, Milan - Italy, 2024, [paper](#)
7. **Emanuele Vivoli**, M. Bertini, D. karatzas, “CoMix: Comprehensive Benchmark for Multi-Task Comic Understanding”, **NeurIPS** - Vancouver, 2024, [paper](#)
6. **Emanuele Vivoli**, I. Campaioli, M. Nardoni, N. Biondi, M. Bertini, D. karatzas, “Comics Datasets Framework: Mix of Comics datasets for benchmarking”, **ICDAR W**, Athens - Greece, 2024, [paper](#)
5. **Emanuele Vivoli***, J.L. Baeza*, E.V. Llobet, D. Karatzas, “Multimodal Transformer for Comics Text-Cloze”, **ICDAR**, Athens - Greece, 2024 [paper](#)
4. **Emanuele Vivoli**, A. Gemelli, S. Marinai, T. Zappaterra, “Deep-learning for dysgraphia detection in children handwritings”, **ACM DocEng**, Limerick - Ireland 2023 [paper](#)
3. A. Gemelli*, **Emanuele Vivoli***, S. Marinai, *CTE: A Dataset for Contextualized Table Extraction*, **IRCDL**, Bari - Italy, 2023 [paper](#)
2. **Emanuele Vivoli**, A.F. Biten, A. Mafla, D. Karatzas, L. Bigorda, “MUST-VQA: Multilingual Scene-text VQA”, **ECCVW**, Tel Aviv - Israel, 2022 [paper](#)
1. A. Gemelli*, **Emanuele Vivoli***, S. Marinai, “Graph Neural Networks and Representation Embedding for Table Extraction in PDF Document”, **ICPR**, Montréal - Québec, 2022 [paper](#)

Refereed Publications

(ICPR) International Conference on Pattern Recognition, (ECCV) European Conference on Computer Vision, (IRCDL) Information and Research science Connecting to Digital and Library science, (ICDAR) International Conference on Document Analysis and Recognition.

ACADEMIC BACKGROUND	<i>Ph.D. in Multimodal Learning</i>	Nov. 2022 – Present
	MICC, Florence, Italy - CVC, Barcelona, Spain	
	<ul style="list-style-type: none"> Supervised by prof. Marco Bertini and prof. Dimosthenis Karatzas Works: Survey Comics field in Vision and Language, Unification of Comics datasets and Benchmark tasks, creation of new datasets and models. 	
	<i>M.Sc. Computer Engineering [110/110 with honours]</i>	Dec. 2018 – Jul. 2021
EMPLOYMENT HISTORY	University of Florence, AILab-Unifi, Florence (Italy)	GPA: 4.0
	<ul style="list-style-type: none"> Thesis on: “Semantic understanding of scientific papers” 	
	<i>B.A. Computer Engineering [110/110 with honours]</i>	Sep. 2015 – Dec. 2018
	University of Florence, AILab-Unifi, Florence (Italy)	GPA: 3.9
	<ul style="list-style-type: none"> Thesis on: “Handwriting Recognition and Classification” 	
	<i>Researcher and Teaching Assistant</i>	
	University of Florence, NATO SPS, Florence, Italy	Jul. 2022 – Jun. 2024
	<ul style="list-style-type: none"> Key words: self-navigating robot; holographic radars; buried land-mines Main tasks: dataset creation; classification; anomaly detection; prototyping 	
	Computer Vision Center, Barcelona, Spain	Apr. 2022 – Jul. 2022
	<ul style="list-style-type: none"> Defined task of Multilingual scene-text VQA. Conversion of ST-VQA models for multilingual. Created multilingual (5+ lang) dataset Frameworks: mmf (facebook), transformers (huggingface) 	
	University of Florence, Florence, Italy	Aug. 2021 – Mar. 2022
	<ul style="list-style-type: none"> Speeded up paper code of x7.5 by refactoring (data pre-processing and training) Passed Bar Exam for Engineering obtaining Italian title of Engineer 	
	University of Technology, EISLAB, Luleå, Sweden	Jun. 2019 – Aug. 2019
	<ul style="list-style-type: none"> Found bug and fixed paper code on EEG Motor Imagery Classification Taught workshops on “git and vscode for remote programming” and “web services with Angular2+” 	
	University of Florence, Florence, Italy	Jan. 2019 – Feb. 2019
	<ul style="list-style-type: none"> Tutor experience working with 20+ High school students and 3 other tutors Designed 2 weeks of frontal and interactive lessons on python, jupyter notebooks, opencv using machine learning (SVM, MLP, decision trees) 	
	<i>Software Engineer</i>	
	Multiple companies (freelancer), Florence, Italy	Feb. 2017– Dec. 2021
	<ul style="list-style-type: none"> Developed 3 Web applications for real-time data management (i.e. doctor appointments and receipts) Supported 80 doctors, 1500 patients each with low latency and real-time updates, in Angular2+ and GCP, with no-SQL database. 	