

FORMATO EUROPEO PER
IL CURRICULUM VITAE



INFORMAZIONI PERSONALI

Nome	LORENZINI MATTEO
Indirizzo	
Nazionalità	

ESPERIENZA LAVORATIVA

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| <ul style="list-style-type: none">• Date (2024 – Present)• Nome e indirizzo del datore di lavoro• Tipo di azienda o settore<ul style="list-style-type: none">• Tipo di impiego• Principali mansioni e responsabilità | University Library Basel, Schonbeinstrasse 18-20, 4056, Basel.

Scientific Research
Research Project Specialist <ul style="list-style-type: none">• Leveraging LLM-driven NLP techniques to continuously classify and enhance Google Books metadata at scale for improved searchability and accuracy.• Designed and validated a balanced dataset of 60k multilingual (DE-FR-IT) resources, automatically annotated for a text classification task (topic classification).• Trained and fine-tuned a multilingual (DE-FR-IT) multilabel text classification model using PyTorch, leveraging Keras 3.0 backend interoperability to enable seamless experimentation across frameworks, achieving an F1 score of ~79%. |
| <ul style="list-style-type: none">• Date (2024 – Present)• Nome e indirizzo del datore di lavoro• Tipo di azienda o settore<ul style="list-style-type: none">• Tipo di impiego• Principali mansioni e responsabilità | Amazon, Domagstrasse 28, 80807, Munich

Tech
Ontologist II <ul style="list-style-type: none">• Designed comprehensive, scalable ontologies and attributes to describe products, enhancing product discoverability, resulting in an 11% increase in Precision. |

- Date (2019 – 2022)
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 - Date (2019 – 2022)
 - Nome e indirizzo del datore di lavoro
 - Tipo di azienda o settore
 - Tipo di impiego
 - Principali mansioni e responsabilità
 - Date (2015 – 2019)
 - Nome e indirizzo del datore di lavoro
 - Tipo di azienda o settore
 - Tipo di impiego
- Developed a product compatibility reasoning pipeline leveraging LLMs and PyTorch-based neural models, reducing inference time by 8%.
 - Automated the attribute creation pipeline using LLMs and NLP techniques, integrating PyTorch and Keras to efficiently generate 200+ high-quality attributes at scale, accelerating the Compatibility Program by two months.
 - Productionized and deployed an LLM-based product classification model, optimizing its performance through PyTorch and Keras interoperability, improving classification accuracy by 3% across diverse product categories.
- ETH Zurich, Ramistrasse 101, 8092, Zurich
- Scientific Research
Researcher
- Conducted research on hybrid conceptual representation models for architectural and archaeological resources, integrating RDF and OWL.
 - Developed automated methods for data modeling in large architectural and archaeological datasets, utilizing the CIDOC-CRM ontology.
 - Explored scalable strategies for data management in architecture and archaeology, focusing on automation, optimal data delivery, and infrastructure redesign.
 - Applied computer vision techniques to interpret historical images and data in archaeology and architecture, using advanced algorithms to analyze artifacts and excavation findings.
 - Led seminars on knowledge management and digital collections, emphasizing applications in cultural heritage preservation.
- Ministero per I Beni e le Attività Culturali, Biblioteca Nazionale di Roma, Viale Castro Pretorio 105, Rome
- Government
Metadata Specialist
- Designed and Modelled the PICO metadata schema in compliance with CIDOC-CRM ontology.
 - Built and Implemented the Linked Open Data infrastructure in Cultura Italia digital library.
 - Revised the PICO metadata profile to align with the ICCD 3.0 schema.
- Austrian Academy of Science, Austrian Center for Digital Humanities, Backerstrasse 13, 1010, Vienna.
- Scientific Research
Researcher

- Principali mansioni e responsabilità
 - Supported research infrastructure in the humanities by designing the PARTHENOS-PE ontology.
 - Designed the CLARIN-CMDI metadata profile using CIDOC-CRM and PARTHENOS-PE ontology.
 - Created a Python script to automatize the creation of RDF graphs (340k records.).
 - Conducted research on improving archaeological data management by designing and implementing domain-specific ontologies.
 - Enhanced data interoperability in archaeology through the utilization of CIDOC-CRM and PARTHENOS-PE ontologies, along with metadata standards, to improve metadata profiling.
 - Developed Python scripts to automate the creation and integration of RDF graphs in large-scale archaeological datasets, resulting in more efficient data processing.
 - Semester-long course (4 ECTS credits) in Knowledge Representation and Management in Archaeology at the University of Vienna.

- Date (2013 – 2013)
 - Nome e indirizzo del datore di lavoro
 - Stanford University, Stanford (CA) 94305
 - Tipo di azienda o settore
 - Scientific Research
 - Tipo di impiego
 - Visiting Researcher
 - Principali mansioni e responsabilità
 - Study and definition of knowledge model for Textual Analysis and Textual Data Mining.

- Date (2009 – 2012)
 - Nome e indirizzo del datore di lavoro
 - Ministero per I Beni e le Attività Culturali, Biblioteca Nazionale di Roma, Viale Castro Pretorio 105, Rome
 - Tipo di azienda o settore
 - Government
 - Tipo di impiego
 - Metadata Specialist
 - Principali mansioni e responsabilità
 - Defined best practices for metadata implementation.
 - Developed the conceptual representation model for archival resources in the Cultura Italia digital library, adapting the ICCD schema to the PICO model.
 - Developed a conceptual representation model for archival resources (from PICO to EDM) to enable metadata harvesting from Cultura Italia to the Europeana Digital Library.

- Date (2006 – 2008)
 - Nome e indirizzo del datore di lavoro
 - Università degli studi di Firenze, Piazza Ciardi 5, Prato.
 - Tipo di azienda o settore
 - Scientific Research
 - Tipo di impiego
 - Research Fellow
 - Principali mansioni e responsabilità
 - Created an ontological structure for the management of the archaeological records.
 - Investigated knowledge model representation in archaeology domain

ISTRUZIONE E FORMAZIONE

- Date (2017 – 2022)
- Nome e tipo di istituto di istruzione o formazione
- Principali materie / abilità professionali oggetto dello studio

- Qualifica conseguita
- Livello nella classificazione nazionale (se pertinente)

- Date (2012 – 2014)
- Nome e tipo di istituto di istruzione o formazione
- Principali materie / abilità professionali oggetto dello studio

- Qualifica conseguita
- Livello nella classificazione nazionale (se pertinente)

- Date (2006 – 2009)
- Nome e tipo di istituto di istruzione o formazione
- Principali materie / abilità professionali oggetto dello studio

- Qualifica conseguita

- Investigated CIDOC-CRM ontology.

Università degli Studi di Trento & Fondazione Bruno Kessler

Addressed the problem of automatic evaluation of the quality of metadata in digital cultural collection. PhD thesis, Metadata Quality Evaluation in Cultural Heritage Domain.

- Proposed a solution using machine learning (binary classification and NLP) for metadata quality evaluation and entity extraction.
- Built a model for machine learning classification.
- Developed a dataset containing 100K+ annotated descriptions of art objects and archaeological artifacts.

Dottorato di Ricerca in Ingegneria Informatica (PhD)

Università degli Studi di Sassari

- Investigated the settlement dynamics in the medieval era in the Mediterranean basin.
- Developed a predictive GIS model for studying settlement dynamics on the island of Pantelleria.
- Developed a framework for 3D modeling and representation of archaeological artifacts and structures using photogrammetric techniques.
- Analyzed the issue of data accessibility and utilization of archaeological data through digital infrastructure.

Scuola di Specializzazione in Archeologia Cristiana e Medievale

Università degli Studi di Pisa

- Analyzed the settlement patterns in northwestern Sardinia.
- Developed a predictive geographic model for archaeological risk.
- Analyzed the transition period between the Roman and the medieval period in North Africa.
- Analyzed the issue of data accessibility and utilization of archaeological data through digital infrastructure.

Laurea Specialistica in Archeologia (2/S)

- Livello nella classificazione nazionale (se pertinente)

- Date (2002 – 2005)
- Nome e tipo di istituto di istruzione o formazione
- Principali materie / abilità professionali oggetto dello studio
- Qualifica conseguita
- Livello nella classificazione nazionale (se pertinente)

Università degli Studi di Pisa

- Data Management of Archaeological Artifacts

Laurea Triennale in Scienze dei Beni Culturali

CAPACITÀ E COMPETENZE

PERSONALI

Acquisite nel corso della vita e della carriera ma non necessariamente riconosciute da certificati e diplomi ufficiali.

PRIMA LINGUA

ITALIANO

ALTRE LINGUE

INGLESE

- Capacità di lettura ECCELLENTE
- Capacità di scrittura ECCELLENTE
- Capacità di espressione orale ECCELLENTE

TEDESCO

- Capacità di lettura BUONO
- Capacità di scrittura BUONO
- Capacità di espressione orale ECCELLENTE

CAPACITÀ E COMPETENZE

RELAZIONALI

Vivere e lavorare con altre persone, in ambiente multiculturale, occupando posti in cui la comunicazione è importante e in situazioni in cui è essenziale lavorare in

With extensive experience in multicultural research and corporate environments such as ETH, Amazon, and the University of Basel, I have developed strong teamwork and collaboration skills. My ability to communicate effectively is demonstrated through academic and corporate presentations, university teaching, and interdisciplinary projects. I have successfully coordinated international research initiatives, working with institutions like SARI, PARTHENOS, and the Ministry of Culture. Actively engaged in professional and academic networks, I participate in conferences and workshops in Digital Humanities and AI. Adaptable and solution-oriented, I thrive in dynamic environments, mediating complex challenges within

squadra (ad es. cultura e sport), ecc.

multidisciplinary teams.

CAPACITÀ E COMPETENZE ORGANIZZATIVE

Ad es. coordinamento e amministrazione di persone, progetti, bilanci; sul posto di lavoro, in attività di volontariato (ad es. cultura e sport), a casa, ecc.

I HAVE STRONG ORGANISATIONAL SKILLS, GAINED THROUGH COORDINATING INTERNATIONAL RESEARCH PROJECTS AND MANAGING COMPLEX WORKFLOWS IN BOTH ACADEMIC AND CORPORATE SETTINGS. MY EXPERIENCE INCLUDES LEADING TEAMS, STRUCTURING METADATA FRAMEWORKS, AND OPTIMISING DATA PIPELINES AT INSTITUTIONS SUCH AS ETH, AMAZON, AND THE UNIVERSITY OF BASEL. I HAVE SUCCESSFULLY OVERSEEN PROJECT TIMELINES, ENSURING EFFICIENCY AND SCALABILITY IN DIGITAL LIBRARY INITIATIVES AND AI-DRIVEN SOLUTIONS. USED TO HANDLING MULTIPLE RESPONSIBILITIES, I EXCEL IN STRATEGIC PLANNING AND RESOURCE MANAGEMENT. MY ABILITY TO STREAMLINE PROCESSES AND DRIVE INNOVATION HAS BEEN INSTRUMENTAL IN DELIVERING HIGH-IMPACT RESULTS ACROSS DIVERSE FIELDS.

CAPACITÀ E COMPETENZE TECNICHE

Con computer, attrezzature specifiche, macchinari, ecc.

I HAVE ADVANCED TECHNICAL SKILLS IN PROGRAMMING, DATA MANAGEMENT, AND AI, DEVELOPED THROUGH RESEARCH AND INDUSTRY ROLES AT ETH, AMAZON, AND THE UNIVERSITY OF BASEL. PROFICIENT IN PYTHON, R, AND SEMANTIC WEB TECHNOLOGIES, I HAVE DESIGNED AND DEPLOYED MACHINE LEARNING MODELS, ONTOLOGIES, AND METADATA FRAMEWORKS FOR LARGE-SCALE DIGITAL ARCHIVES. MY EXPERTISE EXTENDS TO DEEP LEARNING FRAMEWORKS SUCH AS TENSORFLOW AND PYTORCH, AS WELL AS GIS TOOLS FOR GEOSPATIAL ANALYSIS. EXPERIENCED IN DATABASE MANAGEMENT AND CLOUD-BASED INFRASTRUCTURES, I EXCEL IN OPTIMISING WORKFLOWS AND AUTOMATING COMPLEX PROCESSES TO ENHANCE EFFICIENCY AND SCALABILITY.

ULTERIORI INFORMAZIONI

Conferences and Seminars

2022

Seminars:

Fondazione Bruno Kessler, DH Lab – *Scalability and metadata quality evaluation in digital cultural heritage.*

2021

Seminars:

Fondazione Bruno Kessler, DH Lab – *Semantic Representation of Historical Entities Using NER and CIDOC-CRM.*

2020

Seminars:

The Getty Research Institute – *Data Ingestion Pipeline Definition for Archival Data in the ResearchSpace Platform.*

Fondazione Bruno Kessler, DH Lab – *Machine Learning and Cultural Heritage: Main Applications and Future Perspectives.*

ETH Zurich, Institute for the History and Theory of Architecture – *ETL Pipeline Process: Transforming Large-Scale Datasets into Triples for the Experimental Design Research Portal.*

2019

Conference:

Digital Humanities, DH 2019 – *Computer-Assisted Curation of Digital Cultural Heritage Repositories.*

2018

Conference:

International Conference of the Italian Association for Artificial Intelligence, AIIA 2018 – *Automatic Metadata Curation of Cultural Heritage Resources.*

Seminars:

Fondazione Bruno Kessler, DH Lab – *Metadata Quality Evaluation in Cultural Heritage Repositories.*

Fondazione Bruno Kessler, DH Lab – *The Use of CIDOC-CRM Ontology in Archaeology.*

2017

Conferences:

Digital Humanities, DH 2017 – *Lifting Knowledge from the Medieval Age: CIDOC-CRM for the Nurcara Project.*

Clarín Annual Conference – *Something Will Be Connected: Semantic Mapping from CMDI to PARTHENOS Entities.*

Seminar:

University of Vienna, Digital Humanities Symposium – *CIDOC-CRM and Digital Archives: Mapping Strategies.*

2015

Seminar:

Mappa Lab Summer School, University of Pisa – *Semantic Definition of Archaeological Data.*

2014

Seminar:

Mappa Lab Summer School, University of Pisa – *Semantic Definition of*

Archaeological Data.

2013

Conferences:

Society for Historical Archaeology, SHA 2013 – *Data and Metadata Definition of Underwater 3D Archaeological Items.*

Society for Historical Archaeology, SHA 2013 – *Dynamic Models to Reconstruct Ancient Coastal Landscapes: The Use of the MAXENT Algorithm.*

Clarín Annual Conference – *Something Will Be Connected: Semantic Mapping from CMDI to PARTHENOS Entities.*

Seminar:

Center for Spatial and Textual Analysis (CESTA), Stanford University – *The Usage of the CIDOC-CRM Ontology for Textual Mapping.*

2012

Conference:

Computer Applications and Quantitative Methods in Archaeology Conference, CAA 2012 – *The Use of Standardized Vocabularies in Archaeology: PICO Thesaurus, a Semantic Solution for CulturalItalia Project.*

2010

Conference:

Computer Applications and Quantitative Methods in Archaeology Conference, CAA 2010 – *A Novel Approach to 3D Documentation and Description of Archaeological Features.*

Computer Applications and Quantitative Methods in Archaeology Conference, CAA 2010 – *PICO Application Profile: An Interoperable Format for CulturalItalia.*

2009

Conference:

3D Virtual Reconstruction and Visualization of Complex Architectures, 3D ARCH 2009 – *Semantic Approach to 3D Historical Reconstruction.*

2008

Conferences:

ArcheoFoss – *Ontologie di Applicazione e Informazione Geografica: La Ricognizione nel Territorio di Siligo (SS).*

International Conference for Meroitic Studies – *3D Reconstruction of the Lion Temple at Musawwarat es Sufra: 3D Model and Domain Ontologies.*

2007

Conferences:

Computer Applications and Quantitative Methods in Archaeology Conference, CAA 2007 – *Spatial and Non-Spatial Archaeological Data Integration Using MAD.*

ArcheoFoss – *Dati Archeologici Spaziali e Non Spaziali con MAD.*

2006

Conferences:

Computer Applications and Quantitative Methods in Archaeology Conference, CAA 2006 – *Find Info: A Relational Database for Standardization and Automation of Quantitative Analysis of Finds in Stratigraphic Excavation.*

International Symposium on Virtual Reality, Archaeology, and Cultural Heritage, VAST 2006 – *3D Data and Semantic Interoperability in Archaeology.*

Publications

- Ciapetti, A., De Vizia, M., Donnini, A., Lorenzini, M., Masci, M. E., Merlitti, D., Piro, F., & Signore, O. (2011). Lifting communities towards semantic web. In *5th International Congress "Science and Technology for the Safeguard of Cultural Heritage in the Mediterranean Basin"*.
- Ciapetti, A., De Vizia, M., Donnini, A., Lorenzini, M., Masci, M. E., Merlitti, D., Piro, F., & Signore, O. (2012). Baseculturale.it: Un portale semantico per i beni culturali. In *Quaderni del centro studi Magna Grecia. Universita Federico II di Napoli Centro interdipartimentale di studi sulla Magna Grecia*.
- Ciapetti, A., De Vizia, M., Donnini, A., Lorenzini, M., Masci, M. E., Merlitti, D., Piro, F., & Signore, O. (2012). Skosifying user generated content. In *Conference on Information Technologies for Performing Arts, Media Access and Entertainment-ECLAP2012-* (pp. 137–142).
- D'Andrea, A., Felicetti, A., Lorenzini, M., & Perlingieri, C. (2008). Spatial and non-spatial archaeological data integration using mad. In P. Axel, K. Lambers, & I. Herzog (Eds.), *Proceedings of the 35th International Conference on Computer Applications and Quantitative Methods in Archaeology* (p. 241). ISBN 9783774935563.
- Durco, M., & Lorenzini, M. (2017). Semantic mapping from cmdi to parthenos.
- Durco, M., Lorenzini, M., & Sugimoto, G. (2018). Something will be connected-semantic mapping from cmdi to parthenos entities. In *Selected papers from the CLARIN Annual Conference 2017, Budapest, 18–20 September 2017* (No. 147, pp. 25–35). Linköping University Electronic Press.
- Felicetti, A., & Lorenzini, M. (2007). Integrazione di dati archeologici geografici e non geografici con mad. In *Atti del workshop Open Source, Free Software e Open Formats nei processi di ricerca archeologica*.
- Felicetti, A., & Lorenzini, M. (2007). Open source and open standards for using integrated geographic data on the web. In D. Arnold, A. Chalmers, & F. Niccolucci (Eds.), *Future Technologies to empower Heritage Professionals. The 8th International Symposium on Virtual Reality, Archaeology and Cultural Heritage Brighton*.
- Felicetti, A., & Lorenzini, M. (2011). Metadata and tools for integration and preservation of cultural heritage 3d information. In K. Pavelka (Ed.), *CIPA 2011 scientific journal and symposium proceedings*. ISBN 978-80-01-04885-6.
- Felicetti, A., Lorenzini, M., & Niccolucci, F. (2010). Semantic enrichment of geographic data and 3d models for the management of archaeological features. In A. Artusi, M. Joly-Parvex, G. Lucet, G. Ribes, & D. Pitzalis (Eds.), *VAST 2010 International Symposium on Virtual Reality, Archaeology and Cultural Heritage proceedings of conference*.
- Lorenzini, M. (2009). Semantic approach to 3d historical reconstruction. In L. Gonzo, F. Remondino, & S. El-Hakim (Eds.), *International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences*. ISSN 1682-1777.

- Lorenzini, M. (2015). 3d reconstruction of the lion temple at musawwarat es sufra: 3d model and domain ontologies. In M. H. Zach (Ed.), *Proceedings of the 11th international conference for meroitic studies* (pp. 381–388). University of Vienna.
- Lorenzini, M. (2015). Le api di europea come esempio di integrazione rappresentazione delle risorse culturali. In P. Basso, A. Caravale, & P. Grossi (Eds.), *Archeologia e Calcolatori*, 26, 81–95.
- Lorenzini, M. (Automatic metadata curation of the cultural heritage resources).
- Lorenzini, M., Rospoche, M., & Tonelli, S. (2020). Proposta per una valutazione automatica della completezza dei metadati nel contesto delle biblioteche digitali. *Digitalia*, 15(2), 159–167.
- Lorenzini, M., Rospoche, M., & Tonelli, S. (2021). Automatically evaluating the quality of textual descriptions in cultural heritage records. *International Journal on Digital Libraries*, 22(2), 217–231.
- Lorenzini, M., Rospoche, M., & Tonelli, S. (2021). On assessing metadata completeness in digital cultural heritage repositories. *Digital Scholarship in the Humanities*, 36(Supplement_2), ii182–ii188.
- Lorenzini, M., D’Andrea, A., & Milanese, M. (2010). A novel approach to 3d documentation and description of archaeological features. In F. J. Melero, P. Cano, & J. Revelles (Eds.), *Proceedings of the 38th International Conference on Computer Applications and Quantitative Methods in Archaeology (CAA)*. ISBN 978-84-693-0772-4.
- Masci, M. E., Lorenzini, M., De Vizia Guerriero, M., Ciapetti, A., & Donnini, A. (2012). Skosifying user generated content. In *SKOSifying User Generated Content* (pp. 137–142).

ALLEGATI Certificati laurea triennale, laurea magistrale, Diploma di Scuola di Specializzazione, Diploma di Dottorato. Unico file titoli_di_studio.pdf

Data

Firma

26/03/2025

Dichiarazione di veridicità (Ai sensi degli artt. 46 e 47 del D.P.R. 28 dicembre 2000, n. 445)

Io sottoscritto Lorenzini Matteo, nato a Livorno il 14 Luglio 1981, residente in Eichenstrasse 19, 4054, Basel (CH), ai sensi e per gli effetti degli artt. 38, 46 e 47 del D.P.R. 445/2000 e s.m. e i., consapevole delle sanzioni penali previste dall' articolo 76 del D.P.R. 28 Dicembre 2000, n.445/2000 e s.m e i. nelle ipotesi di falsità in atti e dichiarazioni mendaci che, costituisce condotta punibile ai sensi del codice penale e delle leggi speciali in materia

DICHIARO

la veridicità delle informazioni riportate nel presente curriculum vitae.

DICHIARO

di essere in possesso dei titoli riportati nel presente curriculum vitae.

Inoltre, autorizzo il trattamento dei miei dati personali ai sensi del D.Lgs 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali" e dell' art. 13 del GDPR (Regolamento UE 2016/679).

Data

Firma

26/03/2025