

ELENA MASSERINI

PHD STUDENT IN COMPUTER SCIENCE

CONTACTS

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SUMMARY

Computer Science PhD student at the University of Milano-Bicocca, working with the software architecture and testing laboratories (SAL, LTA). I am currently specializing in the fields of conversational AI systems testing and of failure reproduction in Android. I'm passionate about research, software development, testing, and teaching. I am a very organized and precise person, always interested in learning something new and with good skills in problem solving, communication and teamwork.

EDUCATION

In progress
Nov. 2025

PhD in Computer Science

University of Milano-Bicocca
Supervisors: Daniela Micucci, Leonardo Mariani
Topic: Quality assurance of conversational AI systems.

Oct. 2024
Oct. 2022

Master's Degree in Computer Science

University of Milano-Bicocca
Grade: 110L | Average: 30.0
Thesis: Context-aware reproduction of malfunctions in Android apps
Description: Definition and implementation of a Record, Rebuild and Replay approach for automated reproduction of malfunctions in Android applications.
Supervisors: Leonardo Mariani, Daniela Micucci

July 2022
Sept. 2019

Bachelor's Degree in Computer Science

University of Milano-Bicocca
Grade: 110L | Average: 29.7
Thesis: Experimentation of anonymization techniques supporting faults reproduction in Android applications
Description: Study on the impact of different privacy-preserving techniques for user data on the ability to reproduce malfunctions in Android apps.
Supervisors: Daniela Micucci, Davide Ginelli

July 2018
Sept. 2013

Scientific High School Diploma

Scientific High School - Filippo Lussana
Grade: 97/100

RESEARCH CONTRACTS

Nov. 2028
Nov. 2025

PhD Scolarship in Computer Science

University of Milano-Bicocca
Supervisors: Daniela Micucci, Leonardo Mariani
Topic: Quality assurance of conversational AI systems.

Oct. 2025
March 2025

Research Grant - Assegno di Ricerca

University of Milano-Bicocca | 8 months
Description: research activity focused on designing testing techniques for chatbots.
Supervisors: Leonardo Mariani, Daniela Micucci
Collaborators: Diego Clerissi (University of Milano-Bicocca), Joao R. Campos (University of Coimbra), Marco Vieira (University of Charlotte)

Feb. 2025
March 2024

Research Grant - Borsa di Ricerca

University of Milano-Bicocca | 12 months

Description: research activity focused on security testing techniques for conversational - virtual AI agents (chatbots) via fuzzing strategies.
Supervisors: Leonardo Mariani, Daniela Micucci
Collaborators: Diego Clerissi (University of Milano-Bicocca), Joao R. Campos (University of Coimbra), Marco Vieira (University of Charlotte)

Oct. 2023
Nov. 2022

Research Grant - Borsa di Ricerca

University of Milano-Bicocca | 12 months

Description: research activity focused on user data anonymization in bug reports of Android malfunctions via privacy preserving techniques.
Supervisors: Daniela Micucci, Leonardo Mariani

TEACHING AND TUTORING

A.Y.
2025/26

Teaching Assistant - Programmazione 2

University of Milano-Bicocca | 20 hours

Teaching assistant for the Computer Science Bachelor's course "Programmazione 2" about Java object oriented programming.

A.Y.
2025/26
2024/25

Teaching Assistant - Algoritmi e Programmazione

University of Milano-Bicocca | 24 hours

Teaching laboratory assistant for the Maths Bachelor's course "Algoritmi e Programmazione" about Java object oriented programming.

A.Y.
2024/25

Teaching Assistant - Laboratorio di Matematica e Informatica

University of Milano-Bicocca | 24 hours

Teaching laboratory assistant for the Maths Bachelor's course "Laboratorio di Matematica e Informatica" about Java programming.

A.Y.
2025/26

Tutor - B.Inclusion

University of Milano-Bicocca | 25 hours

Tutoring activity for students with specific learning disabilities - thesis writing support.

A.Y.
2026/27
2025/26

Tutor - Programmazione 2

University of Milano-Bicocca | 20 hours

Tutoring activity for the Computer Science Bachelor's course "Programmazione 2" about Java object oriented programming.

A.Y.
2025/26

Tutor - Architettura del Software

University of Milano-Bicocca | 25 hours

Tutoring activity for the Computer Science Master's course "Architettura del Software" about software architectural design.

A.Y.
2026/27
2025/26
2024/25
2023/24

Tutor - Programmazione di Dispositivi Mobili

University of Milano-Bicocca | 60 hours

Tutoring activity for the Computer Science Bachelor's course "Programmazione di Dispositivi Mobili" about Android apps development.

Present
2024

Academic Thesis Tutor

University of Milano-Bicocca

Supervised and tutored over 30 bachelor and master students during their thesis projects at university.

Present
Sept. 2018

Tutoring

Maths, Physics and Computer Science tutoring for high school and university students.

PROFESSIONAL AND VOLUNTEER CONTRIBUTIONS

2027

ISSRE Publicity Chair

International Symposium on Software Reliability Engineering (ISSRE)

Publicity Chair for the ISSRE Conference.

2026

ISSRE Web Chair

International Symposium on Software Reliability Engineering (ISSRE)

Web Chair for the ISSRE Conference.

2026

ReSAISE PC Member

International Workshop on Reliable and Secure AI for Software Engineering (ReSAISE)

PC Member for the ReSAISE Workshop co-located with ISSRE 2026

2026
2025

ISSRE Artifact Evaluation Committee

International Symposium on Software Reliability Engineering (ISSRE)

Member of the Artifact Evaluation Program Committee for the ISSRE Conference.

2026

QA4Agents Organizing Committee

Quality Assurance for Conversational Agentic Systems (QA4Agents)

Member of the Organizing Committee of the QA4Agents Workshop.

2023
2022

SMAU Milan Guide

SMAU - 40 hours

Guide in an innovation and start-up exhibition from all Italy.

May 2020
March 2020

TOP - Tutoring Online Project

30 hours

Volunteer tutoring for middle school students with project TOP, organized by Bocconi University and Harvard University to help young students in fragile contexts during the Covid period.

PUBLICATIONS

Automated Testing of Task-based Chatbots: How Far Are We?

Diego Clerissi, Elena Masserini, Daniela Micucci, Leonardo Mariani

IInternational Conference on Mining Software Repositories (MSR) - Registered Report Track, 2026

Assessing Task-based Chatbots: Snapshot and Curated Datasets for Dialogflow

Elena Masserini, Diego Clerissi, Daniela Micucci, Leonardo Mariani

IInternational Conference on Mining Software Repositories (MSR) - Data and Tool Showcase, 2026

Multi-Level Testing of Conversational AI Systems
Elena Masserini
IEEE/ACM International Conference on Software Engineering (ICSE), Doctoral Symposium, 2026

Towards the assessment of task-based chatbots: From the TOFU-R snapshot to the BRASATO curated dataset
Elena Masserini, Diego Clerissi, Daniela Micucci, João R. Campos, Leonardo Mariani
IEEE International Symposium on Software Reliability Engineering (ISSRE), 2025
Badges: Available, Reviewed and Reproducible Badges

Towards Multi-Platform Mutation Testing of Task-based Chatbots
Diego Clerissi, Elena Masserini, Daniela Micucci, Leonardo Mariani
IWSF & SHIFT, co-located with IEEE International Symposium on Software Reliability Engineering (ISSRE), 2025

Bug Whispering Towards Audio Bug Reporting
Elena Masserini, Daniela Micucci, Leonardo Mariani
IEEE International Symposium on Software Reliability Engineering (ISSRE) - Fast Abstract Track, 2025

Anonymizing Test Data in Android: Does It Hurt?
Elena Masserini, Davide Ginelli, Daniela Micucci, Daniela Briola, Leonardo Mariani
ACM/IEEE International Conference on Automation of Software Test (AST), 2024
Award: Best Paper Runner-Up Award - AST 2024

SUMMER SCHOOLS

July. 2026 — 5 days
TAROT Summer School
Technical University of Munich, TUM
Software Testing Summer School focused on Testing, Validation, and Security of AI-enabled Systems.

Sept. 2025 — 5 days
Mediterranean Machine Learning Summer School - M2L
University of Split, FESB
Mediterranean Machine Learning Summer School focused on deep learning, computer vision, natural language processing and generative models.

Aug. 2025 — 3 days
SIESTA Summer School
Università della Svizzera Italiana, USI
Software Engineering Summer School focused on recent trends in software engineering in academy and industry.
Award: Speaker's choice presentation award

July 2016 — 10 days
Study Tours Experience - Rider University
Rider University, New Jersey
Advanced level language and culture summer school program at Rider University.

AWARDS

2024
Best Paper Runner-Up Award - AST
Best Paper Runner-Up Award for "Anonymizing Test Data in Android: Does It Hurt?", Elena Masserini, Davide Ginelli, Daniela Micucci, Daniela Briola, Leonardo Mariani, In 5th ACM/IEEE International Conference on Automation of Software Test (AST 2024)

2020 **STEAMiamoci Scholarship**
Assolombarda, STEAMiamoci Project
Academic grade-based STEM Scholarship for women in STEM.

2020 **Maria Gaetana Agnesi Award**
Assolombarda, STEAMiamoci Project
Academic grade-based Award for women in STEM.

2018 **First Prize, "Scribo Ergo Sum" Writing Contest**
Bergamo writing contest for High School students
Theme: promotion of diversity and inclusivity.

2017 **Honor Mention, "Scribo Ergo Sum" Writing Contest**
Bergamo writing contest for High School students
Theme: freedom and mental illness.

PROJECTS

ABRACADABRA
Technologies: Java, Android, Python
Record, Rebuild and Replay automated system to reproduce malfunctions in Android applications via partial recording of user actions, complete sequence reconstruction based on an application state graph and automatic actions replay and malfunction assessment.

TOFU Datasets
Technologies: Python, GitHub, Rasa, Dialogflow, Amazon Lex, LangChain, CrewAI, Agno, LlamaIndex
Datasets of open source conversational agents of different platforms (Rasa, Dialogflow, Amazon Lex, LangChain, CrewAI, Agno, LLamaIndex) automatically collected from GitHub repositories and annotated with structural and utility information. These datasets can be used as evaluation benchmarks for quality assessment techniques.

ConFuze
Technologies: Java, JavaScript, Botium, Rasa, Dialogflow
Conversational fuzzer for chatbot robustness and functional testing, that can modify seed tests for conversational agents (sentences) with unexpected inputs.

Turtle Money-Bag
Technologies: Android, Java
Android mobile application, team project for personal finance management and automatic data extraction via receipt scanning.

Smart Train
Technologies: Arduino, C, JavaScript, MQTT
Arduino IoT project for an University exam. System to monitor and control simulated vagons (ESP boards) in a smart train from a web interface, with a NodeJS web server and MQTT communication with ESP boards.

Escape Room VR
Technologies: Unity, C#
An escape room game in VR built with Unity where the user has to solve puzzles to open the door room.