



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 Scholarship 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.
2024/25
2025/26
- 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 - 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.
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.
- A.Y.
2024/25
2025/26
- 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

2026 | ISSRE Web Chair

International Symposium on Software Reliability Engineering (ISSRE)
Web Chair for the ISSRE Conference.

2026 | ISSRE Artifact Evaluation Committee

2025 | 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 | SMAU Milan Guide

2022 | SMAU - 40 hours
Guide in an innovation and start-up exhibition from all Italy.

May 2020 | TOP - Tutoring Online Project

March 2020 | 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

International 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

International 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

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](#), [Agnostic](#), [LlamaIndex](#)

Datasets of open source conversational agents of different platforms (Rasa, Dialogflow, Amazon Lex, LangChain, CrewAI, Agnostic, 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 wagons (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.