



# ELENA MASSERINI

## PHD STUDENT IN COMPUTER SCIENCE

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 virtual AI agents 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.

## CONTACTS

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## SKILLS

Programming	*****
Java	*****
Android	*****
C, C++	*****
Python	*****
HTML, CSS	*****
JavaScript	*****
SQL	*****
GIT	*****
Unity	*****
Problem Solving	*****
Team Work	*****
Time Management	*****

## LANGUAGES

Italian	*****
English	*****
Spanish	*****

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## EDUCATION

### PhD in Computer Science

Università degli Studi di Milano - Bicocca | Nov. 2025 - in progress

**Supervisors:** Leonardo Mariani, Daniela Micucci

### Master's Degree in Computer Science

Università degli Studi di Milano - Bicocca | Oct. 2022 - Oct. 2024

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

### Bachelor's Degree in Computer Science

Università degli Studi di Milano - Bicocca | Sept. 2019 - July 2022

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

### Scientific High School Diploma

Liceo Scientifico Filippo Lussana | Sept. 2013 - July 2018

Grade: 97/100

## RESEARCH CONTRACTS

### Research Grant - Assegno di Ricerca

Università degli Studi di Milano - Bicocca | March 2025 - Oct. 2025 | 8 months

**Description:** research activity focused on designing testing techniques for chatbots.

**Supervisors:** Leonardo Mariani, Daniela Micucci

**Collaborators:** Diego Clerissi (Università degli Studi di Milano - Bicocca), Joao R. Campos (University of Coimbra), Marco Vieira (University of Charlotte)

### Research Grant - Borsa di Ricerca

Università degli Studi di Milano - Bicocca | March 2024 - Feb 2025 | 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 (Università degli Studi di Milano - Bicocca), Joao R. Campos (University of Coimbra), Marco Vieira (University of Charlotte)

### Research Grant - Borsa di Ricerca

Università degli Studi di Milano - Bicocca | Nov. 2022 - Oct. 2023 | 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

### **Teaching Assistant - Laboratorio di Matematica e Informatica**

Università degli Studi di Milano - Bicocca | 2024/25 - 24 hours

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

### **Teaching Assistant - Algoritmi e Programmazione**

Università degli Studi di Milano - Bicocca | 2024/25 - 12 hours

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

### **Tutor - Programmazione di Dispositivi Mobili**

Università degli Studi di Milano - Bicocca | 2023/24, 2024/25, 2025/26 - 60 hours

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

### **Tutor - Architettura del Software**

Università degli Studi di Milano - Bicocca | 2025/26 - 25 hours

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

### **Academic Thesis Tutor**

Università degli Studi di Milano - Bicocca | 2024 - present

Supervised and tutored over 20 bachelor students during their 3-months stage and thesis projects at university.

### **Tutoring**

Aug. 2018 - present

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

## SUMMER SCHOOLS

### **Mediterranean Machine Learning Summer School - M2L**

University of Split, FESB | Sept. 2025 - 5 days

Mediterranean Machine Learning Summer School focused on deep learning, computer vision, natural language processing and generative models.

Poster presented: Towards the Assessment of Task-based Chatbots

### **SIESTA Summer School**

Università della Svizzera Italiana, USI | Aug. 2025 - 3 days

Software Engineering Summer School focused on recent trends in software engineering in academy and industry.

Award: Speaker's choice presentation award

### **Study Tours Experience - Rider University**

July 2016

Advanced level language and culture summer school program at Rider University.

## PROFESSIONAL AND VOLUNTEER CONTRIBUTIONS

### **ISSRE Web Chair**

International Symposium on Software Reliability Engineering (ISSRE) - 2026

Web Chair for ISSRE 2026

### **ACQUIRE Technical Committee**

International Workshop on AI Code QUality, Integrity & REliability (ACQUIRE) - 2026

Member of Technical Program Committee for ACQUIRE 2026

## ISSRE Artifact Evaluation Committee

International Symposium on Software Reliability Engineering (ISSRE) - 2025

Member of Artifact Evaluation Program Committee for ISSRE 2025

## Guide SMAU Milan

Oct. 2022, Oct. 2023, 40 hours

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

## TOP - Tutoring Online Project

April 2020 - May 2020, 30 hours

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

## PUBLICATIONS

### Multi-Level Testing of Conversational AI Systems

Elena Masserini

Accepted at 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 ISSRE 2025

### Bug Whispering Towards Audio Bug Reporting

Elena Masserini, Daniela Micucci, Leonardo Mariani

IEEE International Symposium on Software Reliability Engineering (ISSRE), 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

## AWARDS

### Best Paper Runner-Up Award - AST 2024

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)

### STEAMmocci Scholarship

Assolombarda, STEAMmocci Project | 2020

### Maria Gaetana Agnesi Award

Assolombarda, STEAMmocci Project | 2020

### First Prize, "Scribo Ergo Sum" Writing Contest

Bergamo writing contest for High School students | 2018

Theme: promotion of diversity and inclusivity

# PROJECTS

## ABRACADABRA

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-R and BRASATO

Datasets of open source chatbots of platform Rasa from GitHub repositories, annotated with complexity and language parameters.

## Turtle Money-Bag

Android mobile application, team project for personal finance management and receipts data extraction.

## Smart Train

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

An escape room game in VR built with Unity where the user has to solve puzzles to open the door room.