

Alessia Cecchini

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🏠 25/08/2003 | 📍 Terni, Italy | [R ResearchGate](#)

EDUCATION

MSc Mechanical Engineering

09/2025 – Present

Politecnico di Milano

- *Curriculum:* Mechatronics and Robotics.
- *Relevant courses:* Model Order Reduction Techniques, Advanced Dynamics of Mechanical Systems, Actuating Devices for Mechanical Systems.

BCs Engineering Management

09/2022 – 07/2025

Università degli Studi di Perugia

- *Grade:* 110/110 *cum laude*
- *Thesis:* *The Diet Problem: an optimization approach*
- *Relevant courses:* Classical Mechanics, Introduction to Optimization, Systems Engineering, Applied Thermodynamics, Statistics.

Liceo Scientifico G. Galilei

09/2017 – 06/2022

Terni

- *Grade:* 100/100 *cum laude*

PROJECTS

Electron Dynamics Analysis with Reduced Methods and Schrödinger Equation

- Dynamics of an electron in a bi-crystal structure, modeling and prediction for varying electric field conditions, assisted by reduced basis techniques (POD-Galerkin) - [here](#).

Neural Network Implementation to Predict Failure Propagation in a U-Bolt

- Damage propagation prediction in a U-bolt through Neural Network implementation, modeled through Fisher-KPP equation - [here](#).

Modal analysis of the CityWave Canopy in CityLife

- Vibrational description of the Canopy's behaviour exploiting experimental modal analysis, starting from laser vibrometer data - [here](#).

Finite Element Analysis of the Ski-Jumping Hill of the Winter Olympic Games 2026

- Finite Element Modeling and modal description to analyze the sky-jumping hill behaviour under different loading conditions - [here](#).

Experimental Modal Analysis of a Steel Specimen

- Testing and data processing to extract modal parameters describing the vibrational behaviour of the structure - [here](#).

EXPERIENCE

University Internship

09/2024 – 01/2025

Non-linear optimization and decision theory

Università degli Studi di Perugia

- Modeling and solution of daily problems exploiting non-linear optimization algorithms (KKT, Lagrangian multipliers method) and decision theory (Prospect Theory).

Farm Sales Assistant

2022 - Present (summertime)

Customer care and engagement

Az. Agricola Brunelli

- Supporting and coordinating products selling and customers affiliation through social networks.

SKILLS

Programming: Python (Pytorch, SciPy, NumPy, FEniCS, matplotlib), MATLAB, MySQL, SysML.

Languages: Italian (Native); English (Intermediate); Spanish.

EXTRA

Interests: Neuroscience, Sports (Football, Tennis, Volleyball, F1), Travel, Reading.