

Lorenzo Angeli

Mathematical Engineering · Machine Learning

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Engineering graduate moving into applied mathematics, with a strong interest in machine learning, stochastic modeling, and scientific computing. Open to research and R&D roles in machine learning, in both academic and industry settings.

RESEARCH INTERESTS

Machine learning · Mathematical modeling · Numerical methods & scientific computing · Optimization & optimal control · Probabilistic modeling

EDUCATION

B.Sc. in Engineering Management

2022 – 2026

Università degli Studi di Perugia, Perugia, Italy — taught entirely in English

Final degree grade: **110/110** (highest possible mark). Two examinations passed *cum laude* (with honors). Three-year industrial & information engineering curriculum (classes L-8 / L-9).

B.Sc. Thesis: “*Innovation Diffusion Under Uncertainty: A Stochastic Extension of the Bass Model*” ·

Supervisor: Prof. Giuseppe Saccomandi

Extended the deterministic Bass diffusion model into a stochastic differential equation framework using Itô calculus. Analyzed stochastic stability and the stationary distribution, solved the associated Fokker–Planck / backward Kolmogorov equations (numerical PDE, method of moments, mean first-passage time), estimated parameters by maximum likelihood, and validated the model on real U.S. smartphone adoption data (2007–2022). Implemented entirely in Python.

GRADUATE STUDIES — IN PREPARATION

Completing the prerequisite / curricular-integration examinations required for admission to the **M.Sc. in Mathematical Engineering** at Politecnico di Milano: Mathematical Analysis III, Numerical Computing, and Rational & Continuum Mechanics.

SELECTED COURSEWORK

Mathematics I & Geometry · Mathematics II & Statistics · Introduction to Optimization · Control Systems · Fundamentals of Computer Science & Programming · Systems Mechanics · Physics I & II · Elements of Bioengineering · Information Systems

EXPERIENCE

Academic Internship — Mathematical Modeling

2026

University of Perugia · Supervisor: Prof. Giuseppe Saccomandi

Developed rigorous teaching material on neoclassical growth theory and optimal control: the Solow–Swan model and steady-state analysis, its optimization extensions (Solow–Shell, Solow–Ramsey), and the Pontryagin Maximum Principle. Produced original mathematical figures and worked numerical examples in Python (NumPy, Matplotlib).

SKILLS

Programming	Python (NumPy, Matplotlib, PyTorch), with foundations in scientific computing
Mathematics	Calculus, linear algebra, probability & statistics, optimization, optimal control
Tools	Git / GitHub, LaTeX, Jupyter
Languages	Italian (native) · English (advanced, full working proficiency)

ADDITIONAL INFORMATION

Registered with the Italian protected employment categories pursuant to Law 68/1999 (targeted job placement / collocamento mirato).