Loris Emanuelli

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Data Science Intern candidate with an MEng background in applied mathematics, statistics, and machine learning. I build data analysis pipelines with clear evaluation and reproducible workflows.

Education

University of California, Berkeley - GPA: 3.73/4.00 — **Berkeley, CA, USA**

Master of Engineering in Mechanical Engineering — *May 2026*

Relevant coursework: MECENG 249 (A), MECENG 292C (A+), IEOR 242A (A-); machine learning, optimization, data analytics, time series, forecasting, regression, classification, statistics.

Applied ML and forecasting pipelines, model evaluation, and decision-focused optimization using Python/MATLAB.

Arts et Métiers Institute of Technology - GPA: 3.78/4.0 — **France**

Combined B.S./M.S. Mechanical & Industrial Engineering — *2019 – 2024*

Relevant coursework: linear algebra, optimization, probability, statistics, numerical methods, SQL, simulation, experimental design, solid mechanics, manufacturing.

Work Experience

Tutor (Data Analytics), Alveus – Berkeley, CA, USA — *January 2025 – August 2025*

- Supported students on analytics-focused coursework and quantitative problem solving.
- Guided structured data analysis and reporting practices for clear insights.

Operation Team Member (Intern), La Poste Groupe – Paris, France — *July 2024 – August 2024*

- Contributed to service development tasks with database and accounting support.
- Assisted operational reporting and coordination across internal stakeholders.

Room Service Clerk, Park Hyatt Paris Vendôme – Paris, France — *July 2023 – February 2025*

- Delivered room service operations and coordinated with kitchen teams to meet service standards.

Projects

Operations-Driven Analytics in E-commerce (Capstone 121) | *UC Berkeley* — *Sep 2025 – Present*

- Built prediction-to-optimization pipelines linking demand forecasts to inventory allocation and last-mile routing constraints.
- Engineered 150+ structured/temporal features; compared linear models and tree ensembles with nested CV and error breakdowns.
- Improved order-fill rate by 12% and reduced routing costs by 9% with decision-focused validation under constraints.
- Tools: Python (pandas, scikit-learn), SQL, Jupyter, Git.

Sports Revenue Forecasting Lab (IEOR 242A) | *UC Berkeley* — *Fall 2025*

- Modeled NBA ticket demand (350k rows) with elastic-net and gradient boosting using time-based splits and baselines.
- Designed dynamic pricing scenarios and elasticity checks; improved RMSE by 22% and projected premium-seat revenue by 14%.
- Validated by segment (opponent, weekday, section) with MAE/RMSE tracking and robustness checks.
- Tools: Python (pandas, scikit-learn), Tableau, Excel.

Electricity Price Spread Forecasting Challenge | *Elmy & ENS* — *Spring 2025*

- Forecasted price spreads on 1.2M hourly records using lagged price/load/calendar features and gradient-boosted models.
- Calibrated probabilistic outputs and validated with walk-forward evaluation for regime shifts and volatility spikes.
- Ranked in the top 5% on weighted accuracy.
- Tools: Python (pandas, scikit-learn), SQL, Jupyter.

Leadership & Activities

Handball

- Coach (ages 6–12), two departmental championships; former U18 national champion.

Student Leadership & Competitions

- Founder of ENSAM student associations (5,000+ participants); finance club contributor; national Scrabble competitor (France rank #4).

Skills

Programming: Python (pandas, NumPy, scikit-learn), SQL, MATLAB, Git, PyTorch (basic).
ML & Analytics: data science, data analysis, supervised learning, model tuning, tree ensembles, time series, clustering & PCA, decision-focused learning, statistics, applied mathematics.
Tools: Jupyter, Power BI, Tableau, Excel, LaTeX.
Communication: written and verbal communication, analytical storytelling, stakeholder-ready reporting.
Professional: eager to learn, resourceful, analytical, mentoring/mentorship.
Languages: French (native), English (TOEFL iBT 91), German & Italian (conversational).